

# THE MINING AND METALLURGICAL JOURNAL.

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LOS ANGELES, CAL., AUGUST 15, 1896

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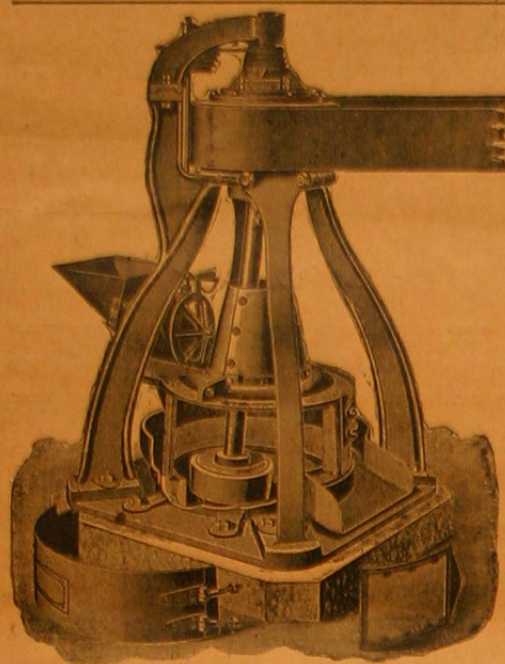
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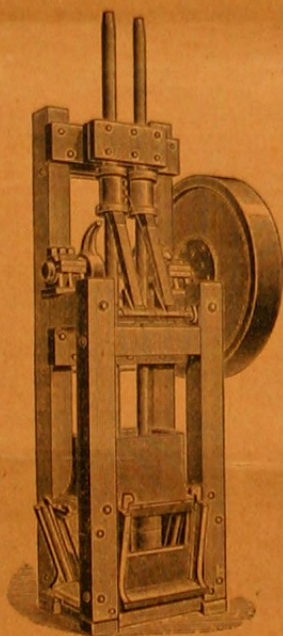
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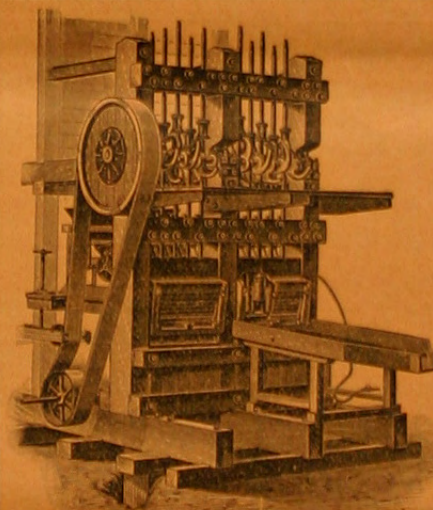
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LET THERE BE NO DOUBT

The presidential candidates are specifically committed on the money question, but presidents cannot make laws, they can only sign such acts as Congress passes or veto them. It is as necessary to have a free silver coinage Congress as a free silver coinage president. Therefore look to your candidates for Congress and for the legislature, as the latter if elected, choose a senator.

Every one of such candidates should be interrogated and a specific unambiguous answer demanded as to their position on the money issue. This is no time for trimming. Men must be for gold or gold and silver. Unless the question is squarely put and an answer inserted, there are plenty of candidates who will attempt to humbug or deceive. They are not to be trusted unless they toe the mark bravely. We say smoke them out.

## A NEW CONSULATE FOR LOS ANGELES.

The immense increase of business of this country with Mexico for the last four years, has induced the Chamber of Commerce of this city to address a communication, through our Charge d'Affairs in the City of Mexico, to the Mexican Department of Foreign Relations, requesting the re-establishment of a consulate in this city. The Mexican Government is willing to grant the request provided sufficient data can be furnished by the Chamber to justify the government in doing so. This institution, which has done so much for the advancement not only of Los Angeles but of Southern California in general, has taken the matter in hand and is preparing a report which will furnish all the information desired by the Government, and before long a consul will be appointed. A gentleman should be chosen to fill the position who is in every way competent to not

only properly represent his government, but also to give all information desired as to the laws, resources, climate, etc., of the country, and such an office would be of great benefit to the citizens of both countries. Many millions are invested in Mexican mines by Californians, and closer relations are very much to be desired.

THE BRITISH NOT SATISFIED.

In the campaigns of 1884, 1888, and 1892 the British people were profoundly interested in the American elections, and gave their influence and aid to the election of Cleveland. They did this because they believed that he would be faithful to the gold standard, and the democratic party had in each platform adopted in those years declared for a tariff policy that would give encouragement to British manufacturing industries and open our markets to their trade.

Now the case is different and the English papers say that if McKinley wins their industries are imperiled, and if Bryan wins their financial policy will be discarded in America, and on one hand or the other a great source of their profit will be destroyed.

What a pity it is that both the tariff and money policies of Great Britain cannot be rejected in this country, and both avenues through which our resources have gone to enrich the British people be closed forever. Protective tariff and free silver coinage go hand in hand, one will not be fully effective without the other. A proper tariff enables our people to produce for themselves without destruction to American wages, it keeps our money at home, gives enlarged employment to our working people, and prevents adverse policies of trade, which have to be paid in just such money as the British people dictate. In order however that the protective tariff shall be effective in the largest measure, there must be sufficiency of money to put it into the fullest operation, to supply the needs of very much enlarged and diversified industries and enterprises. Silver coinage will contribute to that materially if not adequately.

Gold will not be driven out of the country because a protective tariff insures balances of trade in our favor and enables us to draw gold from other countries. Therefore we would be more independent and without danger of being put on a silver basis which is so much feared. With protection and an adequate money volume we, and not Great Britain, can dictate what the international medium of exchange shall be in a very few years.

IT WILL NOT DOWN

The money question cannot be sidetracked nor subordinated. It is a ghost of Banquo that will not down. The question is in the minds of all the people. The prohibitionists split on it, the republicans made it conspicuous, and the democrats, populists and silverites make it the overshadowing issue. The last three elements put revision of the monetary system forward as the first thing to be done.

There was a desire among republican leaders to shirk or obscure the silver coinage issue, but finding it could not be done, to their credit be it said, they tackled it boldly and at once and made the issue clean cut and unmistakable. The managers after the St. Louis convention even thought they could turn public attention away from the money

question to that of the tariff, but finding that the people would tolerate no evasion they have bravely accepted the inevitable, and have vigorously entered upon a campaign of education through a swarm of speakers and a broadcast distribution of goldite literature. Before the campaign is over the country will probably become very intelligent upon the money question.

The fact is the people are more intelligent upon that subject than the bankers and money dealers think they are. The subject has been actively discussed for a good many years, and especially so during the last half dozen. Perhaps on no subject has there been as much literature disseminated as on that of money. Our existing system has been combatted with speech and pen and it is in consequence of this that popular sentiment will not now let the money question be put aside. The goldites will find out that the silver question is one upon which a large number of men, not politicians or professional, who are familiar with facts and figures and who can make arguments that the most learned of the stumpers cannot answer. It will not be a campaign of education all on one side.

There is a prevailing feeling that our money system in several of its features and especially on account of paucity of volume, is calculated to give power and advantage to the few over the many. The constantly falling prices, and the heartless greediness with which capitalists put out their money, have forced the people to make inquiry into the money question. They believe, and plain common sense, sustains the belief, that a fruitful course of the distressful condition of the country is the single gold standard as it forbids the supply of a volume of circulation adequate to the demands of the business of the country, and the further belief is prevalent, and is extending, that business wants cannot be accommodated as they should without a broader and more generous coin basis, and that the only way to secure that is to open the mints to the free and unlimited coinage of silver as well as gold and at a fixed ratio. This will very soon supply the redemption money for a very much enlarged paper volume.

## OUR MONEY SYSTEM.

It will hardly be controverted that our money system is complex and complicated. It comprises gold and silver coins, including fractional dimes, and copper pennies, gold and silver certificates, greenbacks, national bank notes, and the certificates issued on the silver bullion purchased under the Sherman law, which are called treasury notes. The government supplies the circulation to the National banks, which issue it as principal and the government becomes guarantor for its redemption to the holders, it being secured by a deposit of its own bonds. The National bank notes can be retired by the banks and their bonds returned by depositing with the controller of the currency greenbacks or gold coin, and then the government redeems these notes in gold coin from the holders.

All these kinds of money are full legal tender for all debts and dues public and private except the National bank notes. The unit of value is the dollar, and since 1878 the gold dollar. It is a curious fact that no gold dollar pieces are being coined, and no silver dollar pieces except from the bullion purchased under the Sherman law, and as we understand such coinage is con-



finer to the seigniorage, and is not for the purpose of redeeming the certificates issued under that law, for two secretaries of the treasury, one of each of the political parties, have ruled that the government is obligated to redeem those certificates in gold coin if the holders shall so elect; of course, coinage of the fractional pieces, such as half dollars, quarters and dimes goes on constantly, and the mints of this country are open for the coinage of everybody's gold free of cost.

It is said that the government is on a gold basis, that is to say, it will redeem all the paper circulation in gold coin, except the silver certificates, though it can and does pay all other debts, except interest on the bonds, in any kind of money which has been named.

To be on a gold basis is in fact to make all kinds of money as good as gold in foreign transactions. The gold measure is made for such transactions, and is to be applied in our domestic business, whatever may be the effect upon the country.

The Republicans, in their national convention at St. Louis, pledged themselves to maintain the gold standard until an international bimetallic standard can be established with the principal commercial nations, which they pledged themselves to promote. This does not necessarily mean that they will not make any changes in the laws in other respects than that relating to the maintenance of the principle that gold shall be the standard of value. They are pledged against the free coinage of silver at any ratio until concurrence of other commercial nations. It is a proposition not to control our own financial affairs in our own way, but to submit to the dictation of other nations. Such a position is un-American, undignified and humiliating.

The Democrats, on the other hand, in their national convention at Chicago declared for the free and unlimited coinage of gold and silver, at the ratio of 16 to 1, giving the coins full legal tender for all debts and dues, public and private. That ratio substantially prevailed in this country almost from the beginning of the government, and now prevails so far as the coinage of the dollar is concerned, which is going on to a limited extent under the unrepealed provisions of the Sherman law. It was the ratio in Great Britain and Germany when they demonetized silver, while in France and the Latin union, the ratio has been and is 15½ to 1.

The Democrats further propose to deprive the national banks of the power to issue money, and reserve it to the government to supply the country with the necessary paper circulation. In general terms, it has been stated what the two great political parties propose to do with the money question.

There has been a considerable sentiment among Democrats favorable to conferring the privilege and power to supply the country with paper money solely upon banks chartered by the states, with a certain control by the general government; also, there is a sentiment, not confined to either the Democratic or Republican party, in favor of retiring all government issues of paper money, and permitting the national banks to supply it, but there is no declaration in the platform of any party in favor of either of these propositions. As the general government, under the constitution, must furnish the basic or redemption money, it seems logical that it should also supply the representative money; if it controls the volume of metal money, it should regulate the volume of paper money. The

prerogative and duty of the government is to supply the country with a safe, sound and adequate volume of circulating medium, and that power cannot be safely delegated to corporations or private individuals.

#### HOW TO PROTECT SILVER.

California is the largest gold producing state, the third largest mineral producer, and the seventh silver producer of the Union. Some California editors, for political effect at the present time, are stating that California is not a large silver producer and that our silver interests are therefore unimportant, and that the silver question has little industrial interest to the people of this state, or is not a factor in politics at the present time. Every gold mine in the state is a silver producer also to a greater or less extent, according to the amount of silver found alloyed with the gold. The following table shows the gold and silver production of California from 1880 to 1895, and that our silver interests are the third most important metallic mineral product, and is a question of the first importance in the present political campaign.

YEAR.	GOLD.	SILVER.
1880	17,150,941	1,150,887
1881	18,200,000	750,000
1882	16,800,000	845,000
1883	14,120,000	1,400,000
1884	13,600,000	3,000,000
1885	12,700,000	3,500,000
1886	14,725,000	1,400,000
1887	13,400,000	1,500,000
1888	12,750,000	1,400,000
1889	13,000,000	1,034,343
1890	12,500,000	1,163,636
1891	12,600,000	969,697
1892	12,000,000	465,455
1893	12,080,000	607,806
1894	12,750,000	927,506
1895	15,334,317	599,789

The silver output of California from 1880 to 1890, of from one to three millions a year, is the proof of the untruthfulness and ignorance of all who claim that Californian interests are not on the side of protection to silver and against the free trade in it by England, as has been the case in controlling the commercial and coinage value of it, and in purchasing corrupt legislation at Washington (as shown in our last issue in the article, "Who Demonetized Silver?") to decrease the coinage of it, and thereby lower the price, by having the market supplied with silver bars for the Bank of England to purchase at their own price.

The silver problem is one of international North and South American interest, as these countries produce the silver supply of the world, and treaties negotiated between the United States, Canada, Mexico, and South American silver-producing countries, is the step towards bimetalism, which will alone bring England to her proper position, and force her and other European and Asiatic countries to purchase our silver as coin at \$1.29 an ounce and not as silver bars at 65 cents an ounce as at present. This can be done by the North and South American silver producing countries agreeing by treaties to prohibit the exportation of silver in bars, and to permit it to be only exported as silver coin of each country, minted at say a ratio of 16 to 1. This is the protection the silver producing states require, and, when England cannot buy our cheap silver at 65 cents an ounce, as at present, she will have to pay

\$1.29 an ounce for coin, and send it to India to buy wheat and cotton in the form of silver rupees, then our American silver, wheat and cotton will advance in price to gold value and not be sacrificed to the worship of British gold, by selling it at half-price.

The silver question is so far-reaching that it has increased the purchasing power of British gold to double its former value. England can buy two ounces of American silver for the amount it used to cost to purchase one, and coin them into Indian rupees, and make 100 per cent profit. Is the silver problem so far beyond the limits of diplomacy that America must for twenty years more continue to be the tribute-paying slave of British gold?

Some United States industries are protected against British free trade, and the silver mining industry demands the same consideration and protection, by the enactment of treaties with other silver producing countries, so as to control the export of silver. The copper interest of the world combined some years ago to control the market value of copper, and cannot our legislators have tact or patriotism enough to negotiate treaties in the interests of silver, and show that they are not the paid and bribed servants of the Bank of England?

#### TWO MONETARY SYSTEMS CONTRASTED.

ONE of the brightest Americans who has recently visited Mexico is Justice WALTER CLARK of the Supreme Bench of North Carolina. He went there already a believer in the use of silver as money and a strong and outspoken bimetalist and naturally was gratified to find in the prosperity of the Mexican Republic a living confirmation of his theories. At the border he found that he received nearly two dollars in silver for one sanctioned and issued by the Government of the United States, and the next most marvellous thing was his discovering that the Mexican dollars, does *inside* of Mexico, quite the same amount of work as a gold dollar does in the United States. Justice CLARK says, in an article recently published in the *Arena*. "That silver in fact has not depreciated in the least may be seen right here in Mexico, and throughout the fifty millions of people living on this Hemisphere, south of the Rio Grande, in all which countries the silver dollar will pay as much taxes, as much public and private indebtedness, as much railway freight and passenger fare, as it ever did, and where, consequently, farm produce and land will bring the same prices they formerly did. The standard of value not having been artificially enhanced, fixed charges, as debts, and taxes, are not enhanced, and the same amount of produce and labor will pay them."

Justice CLARK then goes on to show that the loss to the people of the Southern States, last year, by the demonetization of silver was, on cotton alone, \$210,000,000. And the north-western wheatgrowers were injured in the same proportion. But in Mexico he found the agricultural interest thriving as is testified to by the continually-expanding local traffic of our railways. This is the true test of internal prosperity. Mexico, had it been financially mismanaged as has been the case with the United States, would be, today, one of the poorest and most wretched countries on the face of the earth. Imagine General DIAZ's Government in 1884, for example having decided to adopt the gold standard! The country could have borne the strain then for the



great fall in silver had not come; but a few years after, the tension would have been enormous and everything would have suffered. Our manufactories would have been annihilated, hundreds of new factories would never have been built; our tropical agriculture, now extending itself a marvellous pace, would have remained small and relatively insignificant. In a word, Mexico would have been a ruined country.

Outside of two or three cities, such as the City of Mexico, Monterey, etc., where the demand for houses consequent on an unanticipated growth, has sent rents up rapidly, the cost of living has not materially advanced. It is true that with the penetration of the railways to all parts of the country there has been diffused a spirit of progress, a desire for more luxurious house furnishings, for costlier and more fashionable clothing, etc., and this has added not to the *essential* cost of living but to the cost of living more *modernly*, so to say. But everyone familiar with this country knows that one may still make the silver dollar of 1896 go quite as far as the dollar of 1876. Imported goods have risen, it is true, in proportion to exchange, but our mills are enabling frugal people to dispense with foreign woollen and cotton textiles. Mexican print clothes are both tasteful and durable and our woollens are most creditable to the manufacturers. Articles such as coffee, in active demand outside, have risen in price because they command gold abroad. But a careful investigation, such as that made sometime ago by the careful and intelligent consular representative of Great Britain at this capital, shows that the Mexican dollar practically does the same work today as formerly.

Even in many lines of imported goods, prices have not greatly advanced (in some cases they have not advanced at all) and this for two reasons, first, that the increasing perfection of machinery in foreign mills has cheapened production so that the obstacle to importation offered by the high exchange has been overcome, and, second because many costly goods are now most effectively imitated in cheaper materials! Ask any great supplier of women's goods if this is not true.

Our home industries, protected by a gold premium of nearly Ninety per cent. are thriving; their dividends fill foreign manufacturers with envy. This question so vastly intricate and so interesting to all of us, is not to be exhausted in a few articles. We shall recur to it, not with a view to converting the people of the United States to a belief in silver money, but to answer the objections raised here at home by those who have not scientifically studied the effects of the monetary system of this country. It is not for the present interest of Mexico that the United States should abandon the gold basis. That huge market to the north of us is paying our coffee, tobacco, henequen and other planters *nearly ninety per cent. premium*, affording them the most stimulating bounty known to commercial history. Our silver mine owners who live in Mexico are likewise contented, the fall in silver does not harm them. We contend that Mexico, under President DIAZ, has the best possible monetary system; the thanks of all Mexico are due to that statesman because he has resisted the appeals of the partisans of gold to overturn our currency system.

Mexico prospers because she has a *sound-money* basis and is not afflicted with fool theorists.

## CORRESPONDENCE

### CALIFORNIA.

CRESCENT CAMP, NEVADA,  
July 30, 1896.

EDITOR JOURNAL:—Even when the political parties are moving their men on the chess board, and politics seem to be the one absorbing question of the time, mining is still being rushed to the front in the desert camps. Your correspondent recently improved the opportunity of visiting the far-famed mines of El Dorado and Montgomery.

At El Dorado canon, the 15-stamp mill of the South Western Mining Company is constantly running on the dump of the Wall street mine, which is turning out well, and, as they have about 5000 tons yet to run, this will be reasonably sure to pay good dividends for several months.

The Little Johnny mine, at Montgomery, was recently started, after several months of idleness, consequent on a change of management and the policy of the company. This mine is surely one of the greatest mines on the desert, all the stopes being full of high grade gold ore, and at no point has it indicated the possibility of the great ore chutes becoming exhausted.

On my return from this district, I met Messrs. Hamilton and Buller, who are old time prospectors and experienced mining men. They were fully equipped with a good outfit, and bound for the high altitudes of Charleston Peak, where they confidentially intimated that gold was to be found in quantities sufficient to astonish all the residents of this hemisphere. I was so strongly impressed that it was only by the exercise of strong will power that I continued my journey.

I understand that Charleston Mountain is attracting quite a number of miners this year; Messrs. Pond and Hammerstadt recently started for that region, equipped for a two months' siege. From the well known ability of these men, it may be confidently predicted that they will uncover something good before long.

Development on several claims at Crescent is being pushed, and some very high grade ore has been opened up during the last four months. The hot weather and lack of feed for stock has been quite a drawback to the prospector, but now that the rainy season is on and the grass is growing, these obstacles are happily overcome. H. M. S.

### A BIG STRIKE.

A New Mining Camp in the Laguna Mountains.

Henry McCain, Thomas McCain, A. B. Cairnes, George J. Magley and George Hubbs have made a big strike in the Laguna Mountains, about ten miles from Morena and a mile and a half north of Watt Garner's ranch, in San Diego county. The ore goes \$68 to the ton in gold, and is free milling. Specimens brought to San Diego, show it to be a gold bearing quartz. In a prospect hole twenty-five feet deep neither wall has yet been found. The prospectors feel very much encouraged over their find.

This strike only tends to confirm the theory that the mother lode extends all along the Sierra Madre. On the north, in San Diego county, beginning with the strikes in the new Stephens district, east of Oak Grove; then next in order to the south are the Rice, Mesa

Grande, Julian, Stonewall and Deer Park districts, and now the Laguna district. It all goes to show that the Sierra Madre have not yet been thoroughly prospected. And evidence is not lacking that the mother lode can be traced far down the California peninsula.

Mr. McCain and his partners have filed location notices of the Wirmetoma mine and mill site.

B. A. STEPHENS,  
San Diego, Cal., Aug. 7th 1896.

## Miscellaneous Mining News.

### ARIZONA.

The oil-burning locomotive for the Congress Gold Company, of Congress, Ariz., has been tested on a trip over about 30 miles of the D. A. V. & P., which gave the desired up and down grade, similar to that of the road for which it is intended. It went up the hills with a string of 20 freight cars, under the supervision of G. W. Prescott, of Highlands, Cal., the inventor of its oil-burning device.

All the new machinery works satisfactorily at the Detroit Copper Co.'s plant at Morenci. One hundred and eighty tons of ore are being concentrated daily. Another concentrating plant is being added, together with twelve Frue vanners. The company is putting in a new crusher, which will greatly increase the capacity of the concentrators. Over \$25,000 per month is paid out by the company.

The railroad companies have contracted for the transportation of 20,000 pounds of machinery from Chicago to Congress Junction for the Planet-Saturn Mining Company, at Fool's Gulch.

J. E. and J. G. Allen have given a bond to Charles McLoyd for five claims in Cherry creek district for \$20,000.

Another bar of gold bullion was brought in yesterday from the Little Jessie mine. It was valued at \$3,500. This is the largest bar of bullion ever brought from Chapparral, and is the result of less than seven days' run of the mill. A new body of good ore has been opened up recently in the mine, and the property never looked so well as at present.

Hon. Nick Galles is pushing work on his Santa Maria properties. He has men at work grading for a mill, and has built a road into the mines. He has a large amount of ore on the dump already, awaiting the construction of the mill, and has ore bodies opened up in the mine from which an abundance can be taken, and is also pushing development work on the properties. The prospect for this camp is very flattering at present.—*Journal Miner*.

It is stated that the Mammon gold property has been thoroughly experted and a report favorable to its purchase expected, which will pass it into the hands of a strong New York company, who will develop and push this valuable property for all it is worth.

The only work being done in the Golden West at present is that of sinking for water, the active labor on the mine being stopped until the return of Chas. F. Kuhn, the guiding spirit, who is at present at Highland, Ill., his former home.



All news from the Bradshaws is of a most favorable nature. Messrs. Bond and Brittingham of the Eclipse have 175 tons of ore at the Tiger mill. The Oro Bonito and Oro Bella will probably be worked in the near future. The ten stamp mill can be put in running order in a very few days. The Cougar and Apache Panther both have a good face of ore exposed.

The new copper property of Joe Ulva and Wm. Stiles has been bonded to a California company for \$6000, which intends operating on a large scale. It is understood that Wm. K. Meade has been instrumental in bringing about these preliminaries.

On September 1st, it is asserted by the parties who seem to know, that the Silver Reef mill and smelter will be in operation under lease, which will work on ores from adjoining properties. A California company has bonds on a number of mines near the mill, and it is presumed they will all work in conjunction.—*Tucson Citizen.*

A. L. Butler is in from Cherry Creek, where he has done 300 feet on his Jessie R. mine, and 40 feet on his Consolidated, showing fine bodies of good ore in both. He reports that Thos. Calvin, of San Francisco, has two men at work on the Pay Rock mine. Report is that Mr. Burmister will erect a quartz mill on the wheatley group. Chas. Donaldson has had 50 tons of ore from his Crosscut mine worked at the Rocky Pass mill. The five-stamp mill at the Verde is running steadily.

T. S. Bullock returned from Silver Mountain Saturday much pleased with the appearance of the Mammoth mine, where a shaft is being driven at one point and a contract has been let to run a tunnel into the vein 600 feet under the mountain. This tunnel may be extended 1000 or 1500 feet. There is in sight an immense body of quartz, all of which carries mineral.—*Prescott Courier.*

Dos Cabezas is slowly coming to the front as a copper mining section. Another one of the properties has been bonded to wealthy parties, who will soon begin operations. In regard to the transaction the *Valley News* says: "Frank White and J. Billings of Dos Cabezas have bonded their copper properties near the Heads to Mr. Byrum of Chicago for a good round figure. Operations are to commence not later than September 1st, and as the properties are very promising and Mr. Byrum backed by unlimited capital, they promise in the near future to employ a number of men and add materially to the bullion output of the district."

The marble quarries of the Santa Ritas are to be opened up immediately. A company has been formed in Tucson with R. T. Millar for president and Chas. T. Connel secretary and treasurer. The marble is of a very fine quality and the developments are looked forward to anxiously, as it means new business for Tucson.

One of the most promising properties in Arizona is that of the Sun Dance Mining Co., located a short distance from Prescott and in the old Hassayampa district. The mines are owned by Chicago people, who have every confidence in the developments. A carload recently shipped was sold for \$75 per ton.

Some of the steel rails for the new narrow-gauge railroad to be built from Torres to Minas Prietas in Sonora have just passed through Nogales.

The Co-operative Mining Co. expect to begin operations in a few days. A Pelton water wheel will furnish the power and will also furnish the light for the camp. The property is on the Agua Fria, a few miles east of Bumble Bee. The Westinghouse Co. furnished the electric machinery.

The 100-ton furnace for the United Globe mine at Globe is being hauled from Geronimo, where it has been for some time.

Captain Kelley, of Crittenden, foreman for the late Col. Fitzgerald of the Empire Smelting Company, has received telegraphic instructions from headquarters to continue work along the lines laid down by Col. Fitzgerald. The company's interests in and around Crittenden are large, and their cessation of work at this time would mean a loss to Southern Arizona which would be painfully felt, and Crittenden is to be congratulated upon the decision arrived at by the Empire Company.

The Little Jessie mine declared a dividend Aug. 10th of \$5,000, and left a neat little surplus in the treasury besides. This has been accomplished in a six weeks' run, since starting up the last time.

Henry Strodthoff has purchased from Chas. Donaldson his interest in the lease on the Munds & Co. property in Cherry Creek, and in the Watson & Donaldson mill on the Verde river. Ore from these claims is now being worked at the Sines-Smith mill on the Verde. The ore is milling well.

The New River Gold Mining and Milling Co. located fifty miles to the north of Phoenix, is developing into a mine very fast. The main working shaft is now down over 100 feet, and two drifts will be run. The vein will average about two and a half feet wide and is of a good grade.

(Mineral Wealth.)

J. H. Sample and Johnny Withers have out 50 sacks of rich ore from their lease on the Nighthawk, and are adding to it fast.

Charles Bowers has sold his interest in the Nighthawk lease to Ed. Thompson and Ed. Cain. Hope the purchasers will make big money.

Henry Loven and S. P. Thompson brought in a shipment of rich ore from White Hills last week. They have more of it where it came from.

The Elkhart machinery is in place and the water being pumped out. In a few days silver-lead ore will be coming out in quantity. The mine has produced over 1000 tons of ore and it is one of the big mines of Mohave county. Mining at Chloride has taken a boom.

Frank Hunt (Curly) was the advance guard of a lot of rich ore taken from the Hunt & Burke mine above Chloride last week.

Rouise, Cooper and Swycoper have a fortune in sight in their lease on the Nighthawk.

Cal Wilson has opened up six inches of ore on his lease on the Sunlight mine.

Stoner & Davis brought in a lot of ore from the Wallapai mountains last Monday.

John Connor and Jim Sullivan have taken a lease on the Cupef.

## CALIFORNIA.

### RIVERSIDE COUNTY.

The extensive group of mines belonging to Messrs. Holland and Tingman of Pinon Mountain district are to be equipped with a dry concentrator which it is said will save all values without water. The mines of these gentlemen have been worked at different times and have always produced good results, the only trouble being want of water.

### LOS ANGELES COUNTY.

We were shown a few days ago a piece of retort gold worth \$1.50 taken from Dead Man's, Haskell and Texas canons. It was taken from eighty pounds of dirt. The placer ground is attracting many prospectors, and Los Angeles county may within six months take a prominent place among the gold-producing counties of California.

The Los Angeles Mining and Stock Exchange began calling stocks today. The Brown-Dake of Prescott, Arizona, is on the boards. The exchange will also call bank and other corporate stocks.

The Red Rover mine at Acton is being worked steadily.

### KERN COUNTY.

#### A Mining Deal.

The Mammoth, Little Mammoth and Tom Lane mines, in Kern county, have been purchased by the Los Angeles Gold Mining Company. The company consists of H. M. Russell, N. F. Wilshire and O. Pooley, of Los Angeles. The present owners will put up a 10-stamp mill at once, which will be worked by water power generated from the Kern River. They will also put up a tramway to conduct the ore from the mine to the mill. The ore may be worked by the cyanide process.

One of the largest nuggets that has been found for some time was picked up by Messrs. Day, Wallace and Harkins, near Goler, last month. The total weight when found was over five and one-half pounds. The quartz was held together by gold, and the lucky finders brought the lump to Los Angeles, and sold it to Wm. T. Smith & Co.

### RIVERSIDE COUNTY.

Work is progressing favorably on the mines of the English Company at Gavilan, and it is expected that a mill will be erected near the Santa Rosa mill. The prospecting that has been done has been so satisfactory that the company intends to work all the lodes on the grant that will be a reasonable distance from the mill.

Mr. John Nooney has been put in charge of the Santa Rosa mine again. At the present time the company are working thirty-five men. Work on the shaft to the east is being pushed, and good ore is being taken out.



The Golden Chariot still remains closed down. Rumors are afloat that work will soon be started on a larger scale than ever, but nothing definite is known.

The Boulder Company, at Pacific district, is ready to commence operations by September 1st. The Bryan mill will have a capacity of fourteen tons per day. No work is being done at present, but active operations will commence all along the line September 1st. The Company have a number of good buildings and a well-stocked store, and will work about twenty men when they commence operations. It is estimated that over one hundred men will be working around the district in a short time. Most of the miners from Cottonwood and other desert districts have left their camps on account of the heat.

#### SAN DIEGO COUNTY.

Mr. Cave Coutts has decided to mill his own ore, of which he has out about three hundred tons or more. His mine, the Ranchito, looks as well as any other property in Southern California with the same amount of development.

The statement of the Golden Cross Mining Company, for the year ending June 18, 1896, shows nearly \$250,000 in gold and silver bullion produced. This is a remarkable showing when it is considered that the property has been in the hands of receivers twice in the last twelve months.

The last lot of ore milled from the Richmond mine in the Banner district, turned out very satisfactorily. Judge Gardner, who owns the property, is forming a company in Los Angeles to work his group of mines, among which is the Richmond. Governor Waterman had a lease on the properties owned by Judge Gardner, and had a tunnel, 700 feet long, finished when he died. His death closed down work, and nothing of importance has been done since. The company now being formed hope to finish the tunnel and cut the rich veins that are known to exist on top.

#### LOWER CALIFORNIA.

The Messrs. Lacy of Los Angeles have sent their schooner yacht to Lower California to bring back 50 tons of ore, which will be milled in Los Angeles. The schooner, which is 75 tons, left San Diego July 28th, and arrived in Guaymas, Mex., Aug. 6th, having made the trip, a distance of 2000 sailing miles, in eight days. This is the fastest time that has ever been made by a sailing vessel. Mr. Richard Lacy joined the yacht at Guaymas, and the party proceeded to the objective point to be reached, which is about 200 miles northwest of Guaymas on the Isthmus side of the gulf. They carried an ample supply of lumber to build small boats with which to transfer the ore from the shore to the schooner. The mine which they intend to investigate belongs to two Mexicans who have made a good living for many years working the output in the arastra. The property is located twelve miles from the coast and has a good wagon road directly to the shaft. The Mexican owners of the mine have guaranteed the fifty tons that will be taken out and brought to Los Angeles to run \$100 to the ton. If the result is satisfactory, the amount extracted is to be applied to the purchase price, and if not satisfactory, any amount left after paying the expenses of the

trip is to revert to the owners of the mine. Lower California is apparently at our doors, but it is so difficult to reach the different points on the peninsula that very few people have attempted anything like a thorough investigation, and the near future is likely to produce some genuine surprises in the way of rich mines.

#### LOWER CALIFORNIA.

##### At the Agua Dulce.

The mill of the La Fortuna Mining and Milling Company commenced operations this week. It started on ore from La Fortuna mine, and from the president and manager of the company, Mr. Gay Lombard, who was in Ensenada the early part of the week, the *Lower Californian* learned that there is sufficient ore in sight in the La Fortuna alone to keep the mill in constant operation for two years. Then there is the Tosora, one of the group, which has more extensive works than the Fortuna and a larger vein.

The mechanical equipment on these properties is superior in every respect. The mill of ten stamps came direct from Fraser & Chalmers' Chicago foundry, as did also the engine, boilers, steam hoists, pumps, etc. There is an abundance of water for perfect amalgamation, and the mill, now that it has started, will be kept running continuously. The almost phenomenally rapid development of these mines, which are so full of promise, have made Agua Dulce a very important camp, and now that the stamps are actually falling very favorable reports may be expected.

#### MEXICO.

One of the great iron mines, which is to be worked in the near future, is a great mountain, some 2000 feet high, situated almost within the city limits of Durango, in the State of Durango, Mexico, and is said to be the most remarkable mountain in the world. It is almost solid iron, and is at the base three-quarters of a mile in thickness, thus giving enough of the metal to supply the entire iron market of Mexico for years. The ore obtained from this mountain is said to yield about 62 per cent pure iron. The machinery, which is on the way to Durango at the present time, is extensive, and will be put into operation as soon as possible.

Word has been received from James G. Sample, superintendent of the Templar mine at El Socorro, that a rich strike has been made. The ore had been running \$170 in gold and \$138 in silver per ton, on July 5th, a strike was made that runs \$7,000 to the ton. The Templar is a hummer and increases as she goes down.—*Chihuahua Enterprise*.

#### NEW MEXICO.

W. H. Newcomb has twelve men employed mining iron ore on Legal Tender Hill, almost within the Silver City limits. Several teams are employed hauling the ore to the depot, it is shipped to the smelters at El Paso. Two cars per day are being sent out.

The turquoise mines at Azure, twelve miles from Silver City, are employing about twenty men at present, under the superintendency of Professor Felix Vogel. These mines are now the greatest producers of turquoise in the world. The stones found here are susceptible of a higher polish and retain

their color better than the celebrated Persian turquoise. The heavy rains are causing some inconvenience, and it is probable that work will be temporarily suspended ere long.

The Mountain Key mine at Mogollon is being worked with two drifts. The old Sheridan mill at Cooney is still shut down, but arrangements are being made to start it up soon. The Queen is working steadily. At the Florida Messrs. Kitt, Weatherby and Banks are pushing work and have done over 500 feet of development work.

The Old Abe mine at White Oaks has always been considered one of the leaders of the territory in the production of gold, and new developments show that it is entitled to a place in the lead. The new shaft is now down over 200 feet and everything looks very favorable. Work is also being pushed on the the Lady Godiva and the Solitaire.

The Silver City Reduction Works are running steadily and successfully treating all ores offered. This home market for ores in small quantities gives the miner who wants to develop his claim an opportunity to get spot cash for any quantity of ore he may have for sale, from one ton upwards. Many poor miners will thus be furnished the wherewith to pay expenses and develop their mines, who could not afford to wait and ship in carload lots to distant reduction works. The firmly established reputation of Mr. S. E. Bretherton as a successful metallurgist, and the well known business integrity of Hon. T. F. Conway, the financial manager of the company, induces the confidence of all producers of ore, who are now bringing their product to the smelter in sufficient quantity to insure its steady operation.

#### PASCHAL.

Herbert Martyr has resumed work on his New Albany copper mine, near Paschal. They have a shaft down 15 feet, at the bottom of which they have 18 inches of 39 per cent of copper ore. The returns from the last shipment were decidedly encouraging.

#### COOK'S PEAK.

John A. Deemer and James J. Cullen are working the Summit group, and are taking out considerable high grade ore.

Barney McDougal is working the Minnehaha property under lease from Peter Sprey.

#### TRES HERMANAS.

M. C. Weaver is working his mine in this camp in a quiet way, and will make a shipment some time during this month.

#### FLORIDAS.

Dave Weaver is doing development work on his properties in this camp, and from all indications he has a good thing.

Work on the Morton, at Hillsboro, has been stopped, and Messrs. Dickey & Laramy, who have been working there, have decided to go on a prospecting trip to Arizona.

The Richmond, at Hillsboro, still continues to ship concentrates. A car load was shipped August 3rd, together with some high grade ore.



## Hillsboro Mines and Mills.

Hall & Macy struck into another and larger body of lead ore in the Percha mine this week. The ore is a sulphide, running from 60 to 70 per cent lead and about 50 ounces silver.

Lessee Collard is running the Bonanza mill on some El Dorado ore, and will next engage on large consignments from the Richmond and Snake mines.

At the Eighty-Five, work will begin Monday next on cross-cutting the vein to the hanging wall, where the largest ore streak lies. The 425-foot level is reasonably expected to develop in larger quantity the rich sylvanite ore encountered above.

Carpenter & Handel have struck some lead ore in the lime and shale belt, between the Percha Creek and the S. L. C. ranch. Geo. Luffkins, the discoverer of the Lake Valley mines, is also prospecting and has made some locations in the same field.

A. W. Farrington will soon commence running a tunnel into a big ledge of low grade gold ore in the Cave Creek country. The ore appears to be a volcanic slag heavily charged with iron oxide, and carrying gold in varying quantities.

It has been demonstrated, both by the former and present managements of the Richmond mine that the screenings from the old stops carry from \$7 to \$20 per ton in gold. With a mill owned and operated in connection with the mine this would constitute a profitable business, and there are thousands of tons to be had at just the cost of screening and hoisting.—*Advocate*.

## Cerrillos Smelter.

At Cerrillos, last week, R. H. Ayers, agent for Frazer & Chalmers, entered into a contract with Judge Balue and others for the immediate erection of a 65-ton smelter. The plant will be in operation in ninety days.

The Organ mountains, which in years past have produced very largely in lead and silver, are commencing to assume their old-time activity, some of the oldest mines are being put in shape to work.

In and around Hachita, where everything has been closed down for years, considerable prospecting is being done, and some of the lead silver mines will undoubtedly be opened up in the near future.

[Enterprise.]

## PINOS ALTOS.

W. C. Chandler is working twelve men on the Mountain Key mine and getting out rich gold ore, which is being reduced at the Stanley-Martin mill.

The Bell and Stephens mill at Pinos Altos is running on ore from their Pacific claim.

About 45 men are employed at the Golden Giant mine and mill. A contract was let Monday to sink the main working shaft one hundred feet deeper, which will give a depth of 456 feet on the vein. The width of vein and grade of ore both improve as depth is attained on this mine.

Spiller & McLean will start work on the Pacific next week. The mill at Silver City will also start crushing ore, as the Silver City water works has sufficient water to guarantee an ample supply for the mill.

## CENTRAL.

Al Corn is working six miners on the 200-foot level of the Texas mine. He has a good body of rich ore in sight. Operations on this mine are somewhat restrained by the prospects of an early transfer of ownership.

Coleman and Acunia have leased the Chance mine, owned by F. J. Wissel. They are drifting on the 150-foot level and have a body of ore which runs \$200 to \$300 per ton, more than half the value being gold. This property promises to be one of the biggest mines in the camp.

## BALD MOUNTAIN.

Crawford and Woodward shipped 25 tons of good grade gold and silver ore from the Big Casino mine, to the Silver City reduction works during the week.

Nick Rascom and George Bell have five men at work on a recent big copper strike on the head of Little Whitewater near the head of Mangus Valley. The ore carries a small value in gold and silver.

## COPPER FLAT.

About 30 men are employed in development work on the Simpson properties and the prospects for a big copper mine are very encouraging.

## HANOVER.

The Hanover and New Mexico smelter, which was compelled to suspend operations for a short time on account of bad roads, has started again. The company has an ample supply of ore and coke on hand to run till the Silver City and Northern railroad is repaired and ready for traffic.

## GOLD HILL.

C. C. Sharp has bought Henry Snyder's interest in the Lottie mine and will start work on the mine very soon.

F. G. Kline and Jessie Keister are working the Nancy Lee mine. They are taking out good ore.

Kline and Keister started the mill this week on ore from Snyder's claim on Gold Hill.

## MOGOLLON.

The Maud S. mill has temporarily suspended operations and a large number of men have been discharged from the mine. The Last Attempt mine, which was being worked by the same company is closed down. Only about 15 men are now employed at the Maud S. mine, and those are on development work. It is said there is a good ore body in the floor of the lowest level but that the shaft will have to be sunk deeper and a drift run two or three hundred feet to reach the ore from below. A new working shaft is at the extreme south end.

The Confidence mine is producing its regular quota of 80 tons of ore per day, which is reduced at the mill on Whitewater. Extensive development is being pushed on the mine and consequently more miners employed than ever before. There are about eighty men employed upon the mine.

## GENERAL NEWS

The Los Angeles *Mining and Stock Exchange Journal* is the name of a new journal now published in Los Angeles. It is a thrifty-looking youngster for two months, and deserves a liberal patronage.

The new office of the Vulcan Iron Works is at the corner of First and Mission streets. The fire which recently occurred obliged the works to move to Kearney and Francisco sts., where they are now in full operation.

The 43rd fair of the great state of California will be held at Sacramento, on September 1st, and will last three weeks. The exhibits will consist of live stock, products of the soil, electric motive power, mechanical display and mining. The management will secure free transportation for all exhibits, and also reduced fare to Sacramento. All inquiries to the secretary will be cheerfully answered. EDWIN F. SMITH, Sec.

The Consolidated Kansas City Smelting and Refining Co., who for some years past have been operating the big lead carbonate mines at Sierra Mojada, State of Coahuila, Mexico, have discovered another deposit of lead ore, which is said to be even more extensive than those of Sierra Mojada. The property is located near Carmen, in the State of Coahuila, and the company is now making arrangements to open up the deposits.

According to Prof. Mulhall, the estimated wealth of the United States is \$64,120,000,000; that of Great Britain, \$47,000,000,000; France, \$42,990,000,000; Germany, \$31,185,000,000. From this it is seen that the United States is far ahead in the matter of aggregate wealth, having about 40 per cent more than Great Britain, about 50 per cent more than France, and about 100 per cent more than Germany. With these facts, we ask: Why should the United States bow before the throne of Lombard street, and beg Shylocks to dictate how we should frame our financial laws?

The next meeting of the U. S. Debris Commission will be held at their room, 59 Flood building, in San Francisco, Cal., Aug. 24th, '96.

Most of the Mica produced in the United States is found at Bakersville, North Carolina. The price depends upon the size of the blocks, and varies from 10c. per pound to \$5.

We are in receipt of a letter from the Costa Rica consulate, at Philadelphia, asking for information about our business houses and manufacturers on the Pacific Coast, the consul also asks to have manufacturers send two sets of catalogues to his office, 233 South Fourth street, Philadelphia, with detailed information about prices, terms of credit and discounts, manner of payment and custom of packing and shipping. He expresses his willingness to give special data on goods desired or products offered in Costa Rica, and any other information that will bring the American manufacturer and the Costa Rican producer or consumer in closer and more profitable relations.



The great improvement that has been made in the use of steam, as applied to power, has necessitated the discovery of something that would control the exhaust steam. A great loss of power is continually going on when the steam is only made use of once. Keller's new, improved, feed-water heater, purifier, condenser and hot-air blast device combined, is destined to fill a great want among steam users. It is claimed that this device returns two hundred degrees of heat more than any other feed-water heater ever constructed. One of the heaters can be seen in operation at the factory of the Chicago Lumber Co., at Denver, Colorado, also at the Omaha and Grant Smelting Works. The Kellers heater is being manufactured by the Star Boiler and Sheet Iron Works, of 2166-76, 15th street, Denver, Colo. All desiring information and particulars can address the manufacturers.

#### El Campo de Wm. T. Smith y Cia.

Este campo está establecido en el No. 128 calle Main Norte, Los Angeles, California, en el gran salon anteriormente ocupado por la Corte Suprema. Aqui se encuentran mesas, sillas y escritorios abastecidos con los materiales necesarios para escribir, etc. Tambien se reciben y se guardan en archivo los principales diarios y semanarios referentes a mineria y reguladores de precios. Tenemos un boletin donde publicamos advertencias para dueños de minas que deseen anunciar por mineros, molineros, etc., es decir: noticias de toda especie se pueden insertar en el. Tenemos una grande mesa dividida en compartamentos donde los mineros pueden dejar sus metales en exhibicion, dejando una descripcion impresa de la situacion de la veta con el certificado de ensayo. Este salon estará abierto desde las 7 a m hasta las 6 de la tarde. Nuestro solo objeto en establecer este campo es para efectuar en contacto al prospectador, minero y capitalista y al mismo tiempo dar celebridad a, y anunciar la casa de Wm. T. SMITH y Cia, Refinadores y Ensayadores de oro plato, 128 calle Main Norte, Los Angeles, California.

"The Jeffrey Manufacturing Company of Columbus, Ohio, have taken up the manufacture of the ROBINSON PATENTED COAL WASHING MACHINERY. There are many in daily use in this and foreign countries and it is conceded to be a most efficient and simple washer. Points of special advantage are: its simplicity, compactness, low cost of installation, low cost of operation, economy in the use of water, and its washing of coal that is not closely sized.

For catalogues address the above Company."

#### New Edition of Mining Laws.

We have received the ninth edition (just out) of Copp's Mining Code, published by Henry N. Copp, a lawyer of Washington, D. C., who has given many years to the study of mining laws. It is a book of more than 200 pages and will be found of great interest to mine owners and prospectors, as it gives the United States mineral land laws and the official instructions thereunder, the various state and territorial mining laws, miners' liens, rights of way, &c., numerous forms for use from the location to the patenting, lease and sale of a mine, and also a large collection of abstracts of court and land office decisions and rulings. Every enterprising mining man will secure a copy. The San Francisco News Company handles Mr. Copp's publications on

the Pacific coast. The book is for sale by the principal book stores and by the publisher in Washington, D. C. The price is 50 cents.

#### THE COMING VEHICLE.

(CONTINUED FROM JULY 15TH.)

The present century now drawing to a close, has been one of beneficial innovations and changes, and probably the greatest revolutionizer of all; the one which has had the most influence on every department of our national life, exists in the marvelous systems of locomotion and conveyance with which we are now so familiar.

It is not perhaps, too much to say that our successors in the not far-distant future will wonder at our want of enterprise or forethought in allowing so many years to pass away before we discovered that our railways even at first so successful, ought to have been supplimented long ago by lines of motor vehicles to serve as feeders to the great main lines and that locomotives to run on common or public roads would have added greatly to our convenience and prosperity. Very recently, however, the principal hindrance to the use and extension of the latter has been removed and it is evident that promises made will be kept and that we are soon to have established in this region, a line of motor wagons for heavy haulage.

They will, of course, be a boon to the agricultural and mining interests in the districts where they may be established, and incidentally they will prove to be as great a boon to the railways with which they afford communication.

The certainty of remuneration is well calculated to induce capitalists to go into these enterprises.

So between the railway companies, local enterprise and the welcome assistance of capital, the necessary sinews of war for equipping and establishing these lines of transport should be forthcoming in abundance.

At all events when those who place their trust in this extension of means of communication can promote lines where they are needed, the hardest part of the battle will be over, and agriculture and mining will have another helping hand stretched out to it.

That there still exists in many parts of the country great bonanzas of silver and gold comparable in value to the famous Comstock lode is not to be doubted, but under present conditions are not sought after. Hitherto it has been commercially impracticable to operate these mines because the excessive cost of transportation made it prohibitive. These properties are not necessarily the richest, on the contrary, the greatest producers have been mines possessing ores of very low grade in large quantities and so favorably situated that they could be worked cheaply. Given these conditions i. e. plenty of low grade ore, intelligent economical management and facility of transportation, the production of gold and silver becomes as prosaic and legitimate a business as any other department of the commercial world.

The statement that a company has been organized for the purpose of constructing motor vehicles designed for heavy traffic and operating same over the common highways has a great significance. It indicates a remarkable revolution in transportation interests and the effects of the change in methods of locomotion foreshadowed will be most radical. They having determined to build and operate motor wagons over the existing roads in a certain portion of the desert region to en-

able miners to convey their products to local markets or to railroad, have been fortunate in working out the problem of cheap transportation to a success in a manner peculiarly suited to the circumstances of that country.

While in the electric railway, as in electric lighting, the tendency of inventors has been to preserve old forms and methods, for the purpose of more easily adapting their devices to public use, in the system of haulage here referred to, a decidedly new departure is taken. Mr. Herbert Spencer, if we remember aright, once drew attention to the survival of conventional curved lines in the bodies of the English railway cars, which thus present the aspect of the old and obsolete stage coaches; and we might instance the more recent case of incandescent lighting in the introduction of which to general notice and use, Mr. Edison sought as far as possible to adhere to methods that had become familiar in the employment of gas. His mains, branches, meters, brackets, electroliers, and switches are, practically, so many like parts of a gas lighting system, and may be safely left to the handling of the most inexpert; only the generating apparatus requires technical skill and knowledge on the part of those who deal with it. Regarding this system, some may say that it is after all, simply an old idea, plus the motive power, but we believe that to the vast majority of people, the transmission of freight or passengers along or over common roads by motor wagons is a surprising innovation, an application for which their information or experience can find no parallel. It need hardly be pointed out that such lines can be made important feeders for main lines of railway. Mineral traffic is only one small part of the work which they can do. Where railways and canals do not exist, these lines will provide the cheapest mode of inland conveyance for all goods on commodities such as agricultural, mineral, manufactured and ranch industry. In new countries these lines will be established and equipped for much less than railways and will convey goods far more cheaply. Surely we are not too sanguine in expecting that great changes will be produced in agriculture and mining by these new facilities for transport. It must not be supposed that we look on these new lines as likely to compete with railways or injure their traffic. On the contrary, they will act as feeders of great value, extending into the districts which could not support the cost even, of the lightest railway. It is impossible to foretell the future of this particular system, but this much is certain; a novel mode of transport, offering exceptional advantages, will be publicly shown on a practical scale in the very near future.

A system of motor wagons for transporting freight and passengers will soon be introduced by a transportation company organized for the purpose under various patents covering the use and application of gas motors to vehicles for common wagon road transportation.

In this system the impelling power is a gas motor carrying its own store of fuel for several days run, and the fuel used is the heaviest grade of naphtha, which will not vaporize at the same temperature of the atmosphere that the more volatile hydro-carbons do. It is carried in a closed tank which is again enclosed in a radiator filled with hot water constantly furnished by the engine cylinders. The radiator performs important double service, cooling the cylinders of the engine and warming the generator. The cir-



culuation of water from the cylinder to the radiator and return is continuous. The inner vessel or carburetter is filled with an absorbent material, which absorbs the charge and leaves no liquid to be lost should a leak occur. Air is drawn automatically through the absorbent material, thoroughly carburetted, and supplied to the engine in exact proportion to the power required. There is not the least element of danger attending its operation. The gas is ignited by an electric spark.

The principle of all gas engines is speed; their speed cannot be varied like the steam engine, but they must run at a nearly uniform rate; therefore special mechanism was required for transmitting power to the axle at any desired rate of speed. It was absolutely essential to complete success that this should be accomplished, and in such a manner that the speed of the wagon could be varied at will of the driver by moving a single lever. The mechanism employed for this important service is positive in action, noiseless and durable. The wearing parts are easily, quickly, and cheaply replaced. It prevents giving shock or jar to the vehicle when starting, and, above all other advantages, transmits maximum power when driving a vehicle at minimum rate of speed.

The motor cylinders are so arranged that in descending steep grades they act as air pumps and at the same time, as most efficient brakes, by means of which, the speed is easily controlled. On a level road the motor can be stopped within its length when running 12 miles an hour, and on grades in a time longer or shorter in proportion. Independent motors that consume just the amount of power required for the work to be done and no more, certainly possess great advantages over any other system, even at the same cost of plant.

This system can justly claim the possession of nearly every advantage that could be considered desirable, free from any serious defect and at the same time more economical than any other.

It is evident that such a system is free from danger, and that a mere right of way is sufficient without the cost of the fee.

It is adapted to uneven surfaces, sharp curves or gradients presenting no serious obstacle. The opportunities for the application of this system are vast and the variety of uses to which it can be put is very great, both in cities and in the country.

The rate of speed will depend on the service to be rendered, the only limitation, however, is in the nature of the roadway.

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## PERSONAL-NEWS ITEMS

F. E. Slutman of the Lombard mine near Barstow called at the JOURNAL office August 13th.

H. C. Steele of the Desert Queen mine in Riverside Co., Cal., has been visiting his old home, Perris, Cal.

Geo. E. Bent has been visiting his brother in Chihuahua, Mexico.

W. A. Hoyt was in Riverside, Cal., last week, displaying some fine specimens of copper and gold ore from the desert.

A. H. Kelley has just returned to Riverside, Cal., from Holcomb Valley, Cal., where he has been dry washing.

A. A. Spendlove, who has been superintendent of the Chihuahua Mining Co., has gone on a trip to New York.

Mr. Barlow of Lockport, Texas, returned home from a mining trip to Mexico last week.

Chas. R. Wores of Tucson, Arizona, has been to San Francisco on mining business. He stopped en route for home at Los Angeles and paid the JOURNAL office a visit.

Geo. B. Isham, E. M., who took a mining trip to Temascaltepec last month, has returned to the City of Mexico.

W. N. McKamey of the Galena and Guerrero Gold and Silver Mining Companies of Guadalupe y Calvo, state of Chihuahua, Mexico, has been on a visit to the City of Mexico.

T. L. McCarthy arrived in Ensenada, Lower California, last week, where he has been putting in the ten-stamp mill of the Fortuna Mining and Milling Co.

A. E. Milliken of Durango, Mexico, is in the City of Mexico on business.

Chauncey Clark, owner of the great Waters mine, in Arizona, is in Los Angeles, visiting his mother.

Paul Warren has returned to Albuquerque, New Mexico, from Cripple Creek, Colorado.

H. G. Verecoe, of Gavilan, Riverside County, Cal., was a visitor at the JOURNAL office, August 10th. He reports great activity at their mines.

Allan Smith, of Patuc, Sonora, Mexico, is back again from his mines. His report confirms all others of the continued prosperity of the mining industry in Mexico.

R. A. McPherson was a caller at the JOURNAL office, August 3rd. He has just returned from a trip up the Colorado, and visited all the mining camps along the river.

Messrs. Shepherd and Todd, two miners from the Colorado River, were in Los Angeles last week. They are looking for a good camp to contract in.

H. B. Eldridge, who represents the Griffin mill, was in Los Angeles, August 1st. He reports the sales of the Griffin mill increasing in a very satisfactory manner, especially in Mexico.

L. W. Morgan, E. M., has returned from Mexico, and can be found at his headquarters in the Wilson Block.

C. C. Williams, of Tocowacho, Honduras, was a visitor at the JOURNAL office, August 5th.

Hubert Vischer, of the Debris Commission, was in Los Angeles, August 7th.

H. B. Verecoe, of the big company operating on the Gavilan grant, in Riverside County, California, has returned from London. He intends to work his properties in a large way.

J. McArthur, who has been mining in Orange County, Cal., was one of the callers at the JOURNAL office, August 10th.

B. Salazar, one of the senators from the State of Chihuahua, Mexico, returned to Los Angeles, August 3rd.

Louis Ruhl, the enterprising and popular traveling man of the Roessler & Hasslacher Chemical Company of New York, is on his tour around the west, in the interest of his company. He made the JOURNAL office a pleasant visit the first of the month.

S. B. McBride, who was superintendent of the Mangas Mining Company, near Silver City, New Mexico, some years ago, has returned to silver City, after an absence of several years.

Frank Kliner, who at one time was one of the largest mining operators in Kingston, N. M., has returned to the banner silver camp of the southwest, and will probably remain.

Frank Simpson, who owns the Copper Flat mines, near Fort Bayard, N. M., arrived in Silver City, the first of the month. Mr. Simpson is a wealthy carpet manufacturer of Boston.

H. M. Merriweather, president of the Co-operative Mining and Milling Company, arrived in Prescott, August 7th.

Wm. Witt, of Macedonia mining camp, San Bernardino County, Cal., was a visitor at the JOURNAL office, August 13th.

Henry Wilson, the foreman of the converter plant at Bisbee, Arizona, has returned from Nova Scotia.

Hon. J. J. Gosper arrived in Globe, Arizona, August 5th. Mr. Gosper is interested in the Emmet mine.

W. B. Davis, of San Francisco, has been on a business trip to Prescott.

Our old friend, Thos. R. Sorin, of Tombstone, is now operating in the Bradshaw mountains.

E. Baumert, of Macedonia mining district, San Bernardino County, Cal., is spending a month in Los Angeles.

W. E. Howard, who is interested in mining in Lower California, is now making Los Angeles his home.

W. S. Engle, who is interested in the Humbug mine, in Arizona, has gone to his home at Whiting, Kansas.

Wm. Ryan, an old timer from Globe, Arizona, has located at Hachita, N. M.

Col. J. M. Wilson, of Minas Prietas, Sonora, Mexico, is visiting in Tucson, Arizona. He reports mining booming in Sonora.

Frank C. Earle, formerly of Tombstone, Arizona, but now representative of the El Paso Smelting Co., has been in Phoenix, Arizona, looking after ore shipments. Frank is one of the best miners and ore buyers west of the Rockies.

Charles Noble, of Dos Cabezas, Arizona, was in Wilcox, Arizona, last week. He reports the copper mining industry in a very flourishing condition in the Dos Cabezas.

Ross Moore, who has been on a trip to Wickenburg, Arizona, has returned to Phoenix, Arizona. He brings very favorable reports of the Osborn Copper mines, in which the value of the gold is greatly on the increase.

W. N. Small, president of the El Paso Foundry and Machine Company, of El Paso, Texas, has been in Los Angeles for a week, and expresses great surprise at the growth of the city.

T. W. Goad, who for several years has been the general manager of the Gold and Silver Extraction Company of America, (Limited), has retired from the management of the Company.

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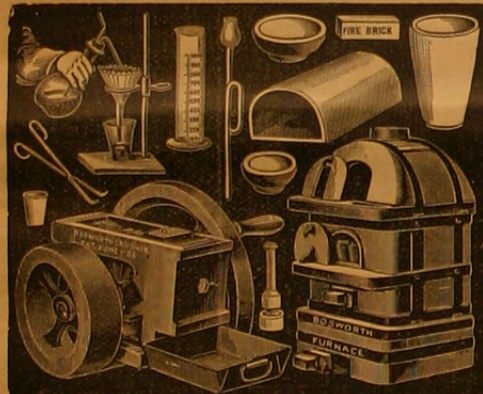
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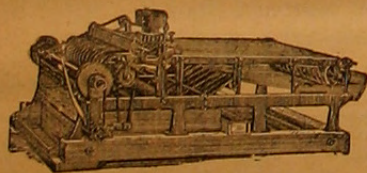
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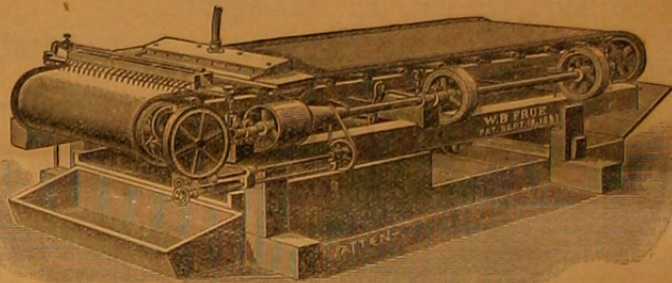
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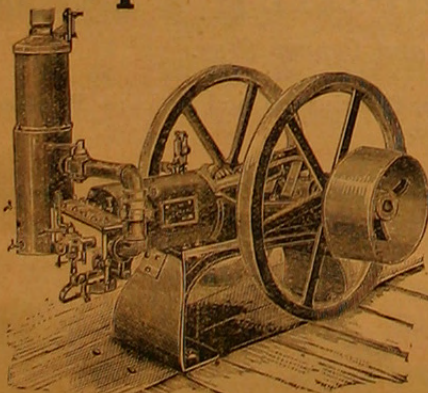
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STIMSON BUILDING, LOS ANGELES, CAL.

### METAL MARKET.

New York Quotations:

	SILVER.	COPPER.	LEAD
Aug. 1	68 1/2	11 00	2 80
" 3	68 1/2	11 00	2 80
" 4	68 1/2	11 00	2 80
" 5	68 1/2	11 00	2 80
" 6	68 1/2	11 00	2 80
" 7	68 1/2	11 00	2 70
" 8	68 1/2	11 00	2 70
" 11	68 1/2	11 00	2 70
" 12	67 3/4	11 00	2 70
" 13	67 3/4	11 00	2 70
" 14	67 3/4	11 00	2 70
" 15	67 3/4	11 00	2 70

### MINING STOCK QUOTATIONS.

#### BOSTON

Allouez	50	Franklin	10 00
Atlantic	18 00	Kearsarge	10 00
Boston & Mont'a	75 00	Osceola	23 00
Butte & Boston	1 50	Quincy	108 00
Cal. & Helca	300 00	Tamarack	75 00
Centennial	2 00	Wolverine	6 50

#### COLORADO SPRINGS STOCKS

Anaconda	56	Mollie Gibson	55
Blue Bell	05	Matoa	11
Colfax	05	Mount Rosa	12
Columbine	03 1/2	Ophir	07
Fanny Rawlins	05	Orphan Bell	13
Gold King	53	Pharmacist	10
Gold and Globe	22	Portland	1 45
Isabella	54	World	02 1/2
Jack Pot	04	Del Monte	03 1/2
Jefferson	13		
Monarch	08		

#### DENVER STOCK REPORT.

Alamo	03	Anaconda	56
Bangkok	05	Aola	03
Bankers	10	Big Six	10
Croesus	05	Boston & Id	17
C. C. Con	13	Colfax	06
Chimbarazo	03	Gold & Globe	17
C. & C. C.	04	Mollie Gibson	50
Golden Fleece	85	Mt. Rosa	12
Gold Standard	04	Pharmacist	10
Isabella	54	Union Gold	30

#### HELENA, MONTANA

Alice	25	Granite Mount	1 65
Bald Butte	2 55	Hope	1 50
Benton Group	10	Iron Mountain	42
Bi-Metallic	3 00	Ontario	1 00
Elizabeth	10	Poorman	40

#### NEW YORK.

Crown Point	45	Sierra Nevada	65
Con. Cal. & Va.	1 80	Standard	2 75
Gould & Curry	80	Union Con.	53
Hale & Norcross	1 25	Iron Silver	3 00
Homestake	90 50	Quicksilver	17 02
Mexican	50	Quicksilver pfd	17 02
Ontario	14 50	Rulwer	25
Ophir	1 30	Yellow Jacket	35
Plymouth	20	Deadwood	45

#### SAN FRANCISCO.

Alta	10	Mono	15
Belcher	37	Nevada Queen	05
Best & Belcher	98	Ophir	95
Bodie Con	55	Potosi	95
Chollar	2 25	Savage	75
Con. Cal. & Va.	1 80	Sierra Nevada	53
Crown Point	45	Union Con.	45
Hale & Norcross	1 25	Utah	11
Mexican	55	Yellow Jacket	45
Gould & Curry	65	Bulwer	25

#### ST. LOUIS.

American Nettle	25	Elizabeth	20
Granite Mt.	1 50	Leo	3
Adams	60	Hope	1 40
Bi-Metallic	3 30	Small Hopes	90

#### SALT LAKE CITY

Ajax	85	Eureka Hill	120 00
Alliance	30	Horn Silver	2 05
Am. Nat. G's	03	Little Pittsburgh	02
Anchor	1 25	Lucky Hill	25
Apex	07	Mammoth	3 05
Bogan	20	Meers	50
Bull. Beck	6 70	Mercur	7 10
Cane Springs	80	New Tintic	2 90
Cent. Eureka	75 00	Niagara	2 25
Cleve. Con.	45	No. Eureka	05
Comstock	15	North Spy	2 40
Crescent	04	Ontario	12 00
Dalton	04	Silver King	17 25
Daly	7 50	Silver Spar	1 00
Daly West	8 70	Tetro	02
Elko	20	Utah	1 85

#### MEXICO

Name of Company	State	Price
Angustias	Guanajuato	\$ 400
Asturiana y Anexas	Zacatecas	440
Cerro Colorado	Chihuahua	10
Concepcion y Anexas	S. Luis Potosi	180
El Oro	Guanajuato	80
do pre.	"	00
Luz de Borda	Michoacan	30
do Free stock	"	30
Luz de Maravillas	Hidalgo	110
Real del Monte	"	850
Rosario y Anexas	Durango	70
do. pref.	"	90
San Rafael del Oro	Guanajuato	500
Sta. Gertr y Anexas	Hidalgo	75
do. Free Stock	"	16
Ste. Maria de la Paz	S. Luis Potosi	180
Tlauzingo	Puebla	30
Zomelahuacan (gold)	Vera Cruz	100
Zona Min de Pozos	Guanajuato	50

NOTE—The above Mexican stocks are figured  
on the basis of Mexican silver.



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Just Listen—Reliable Common Sense Steel Whim, price reduced to \$100. Steam Hoisters, \$300 and up; hand hoisters \$30; steel ore buckets all prices; prospectors' stamp mills \$300. A 10-stamp mill, new, 850 lb. stamps, high mortars, latest improved, only \$800. Ores tested and amalgamation and concentration mills built to fit the ore.

Coal Mine equipments, Screens, Jigs, Tramways, Arastors, Chillian Mills, Ore Sacks, etc. Cornish Rolls, 12x20, weight 6,000 lbs., price \$350; Feeders, Rock Drills and Compressors, Bumping Tables, Chlorination Mills, etc. Blake Crushers, 7x10, weight 8,100 lbs., only \$250. Cyanide Mills.

Our patent Turntable Car has equal load on each wheel, wears even, dumps automatically. Our 100 page catalogue with hundreds of useful tables, FREE. Best Machinery and least money for it.



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A specialty. Round, slot or buried slot holes. Genuine Russia Iron, Homogeneous Steel, Cast Steel or American planished Iron, Zinc, Copper or Brass Screens for all purposes. CALIFORNIA PERFORATING SCREEN CO., 145-147 Beale St., S. F.

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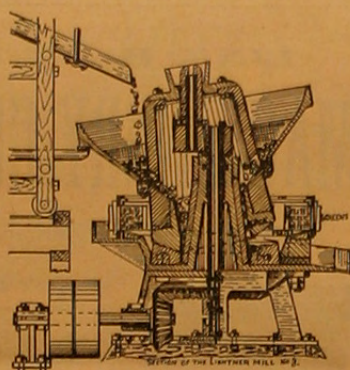
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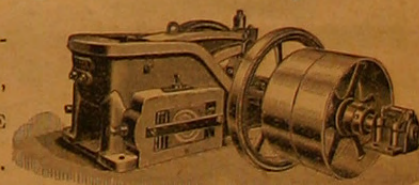
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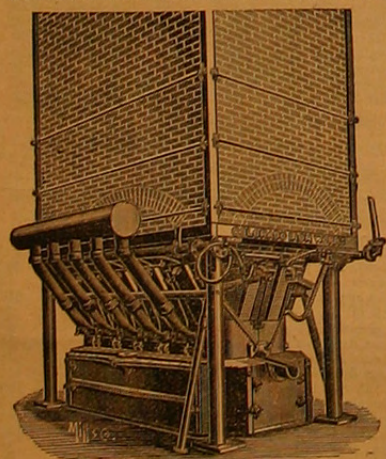
We are now installing complete Crushing Plants for Cyanide, Chlorination and Bromine Processes, guaranteeing any capacity per day desired to any degree of fineness.

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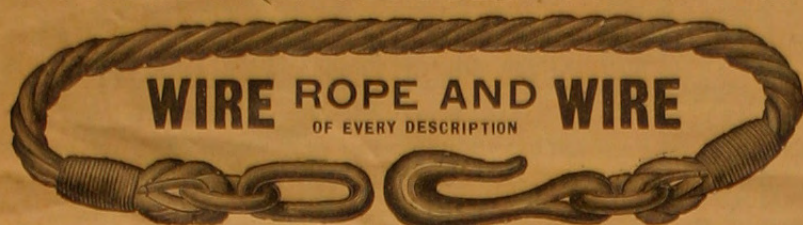


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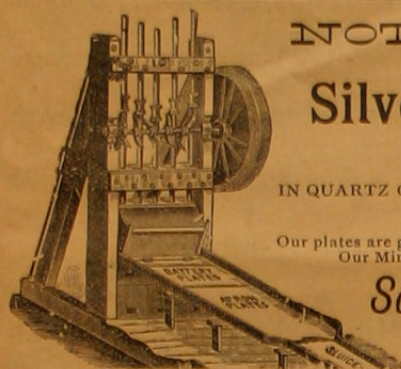
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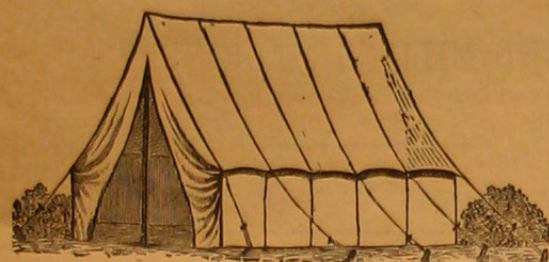
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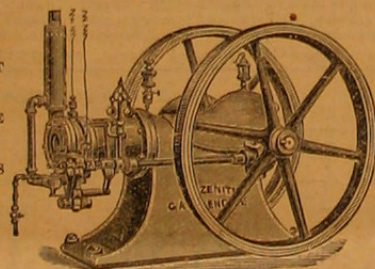
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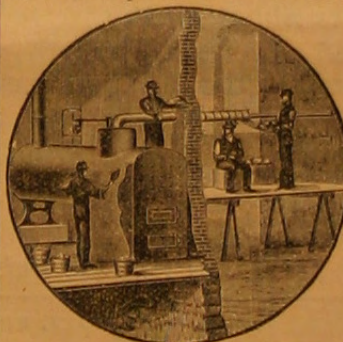
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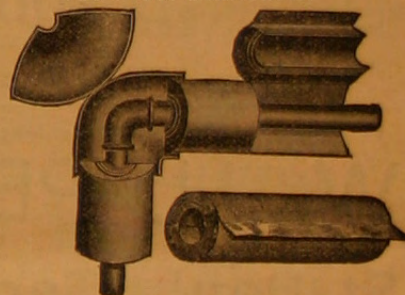
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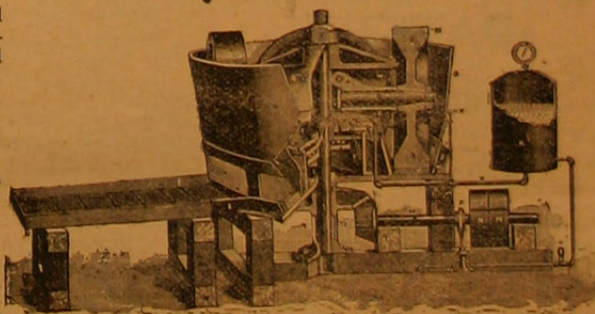
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Two 80 Horse Power Boilers.  
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One 16"x42" Hamilton Corliss Engine.  
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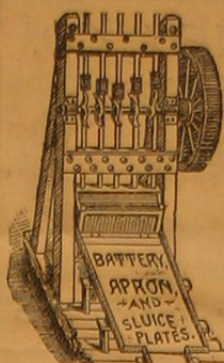
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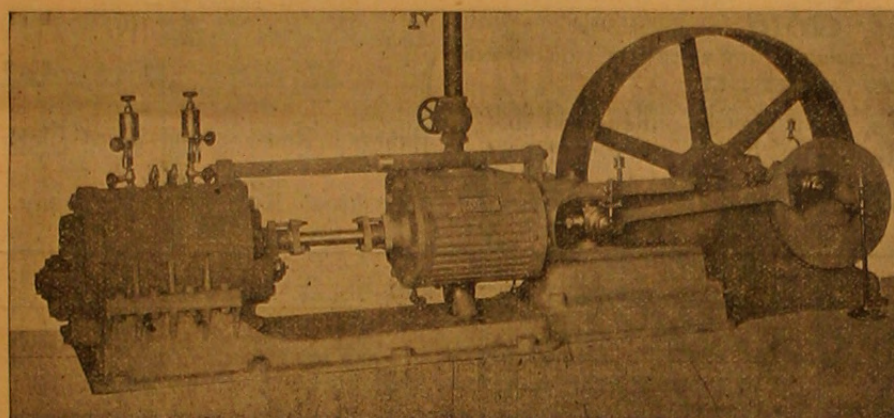
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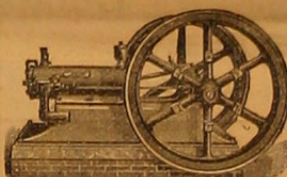
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ESPECIALLY ADAPTED FOR MINING USES.  
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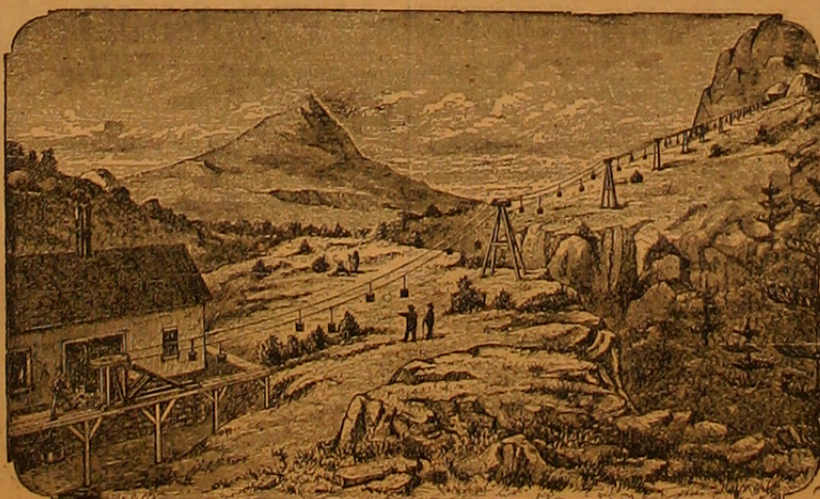
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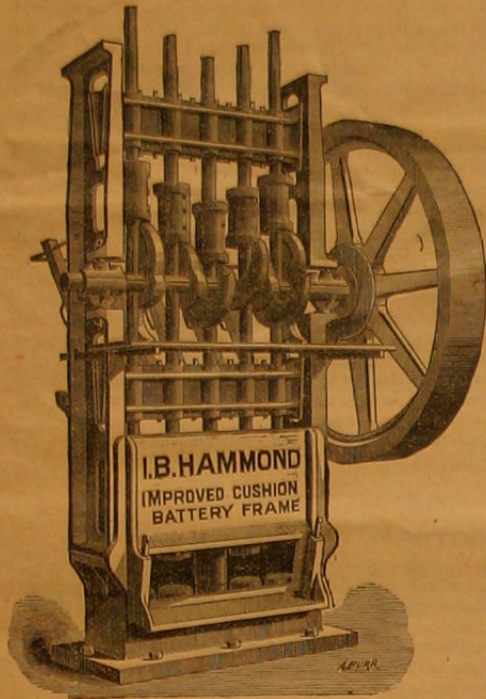
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Specialty made of the Improved, Iron Frame Self-Contained Stamp Mill, the greatest success of the day in reduction of ore to pulp. A great boon to mill builders in countries where timber is plenty and therefore a greater boon to those who have no timber from which to draw the huge pieces needed in old style mills. We claim for this mill:

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**We call the attention of Prospectors to our Self Contained Two Stamp Mill.**

We have inaugurated a system of amalgamation and Concentration which renders both much more satisfactory and cheapens the cost of concentration by a great saving in the repairs to the complicated machinery now used.

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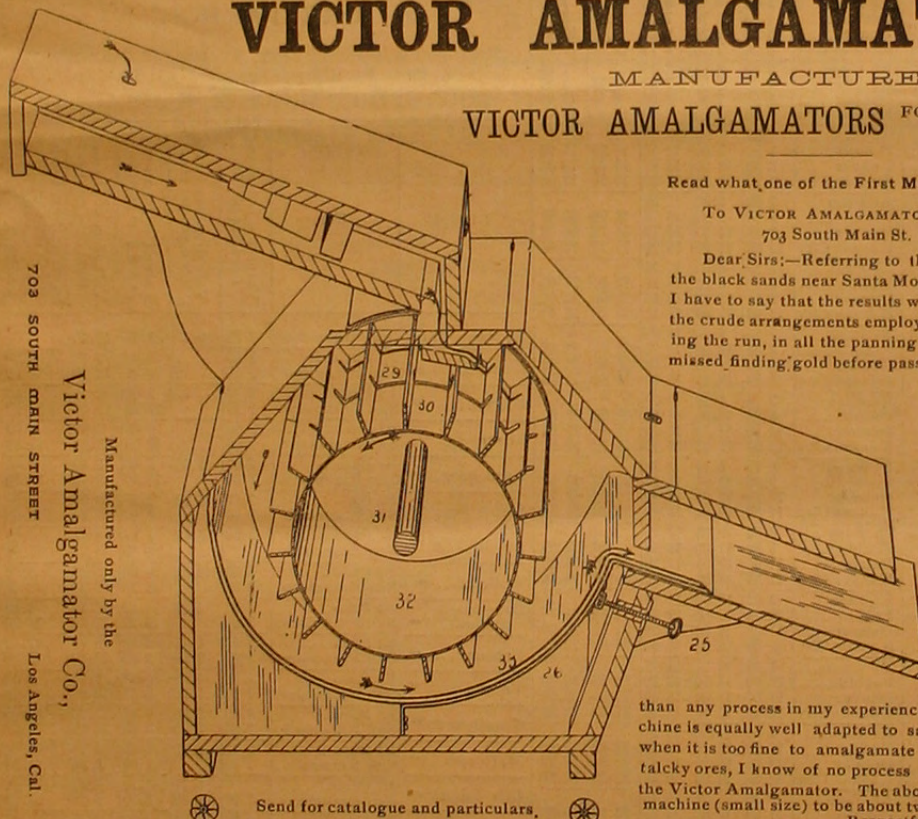
To VICTOR AMALGAMATOR CO.,  
703 South Main St. Los Angeles, Cal., May 20, 1896

Dear Sirs:—Referring to the run made by me of fifty tons of the black sands near Santa Monica with the Victor Amalgamator I have to say that the results were quite satisfactory, considering the crude arrangements employed in feeding the machine. During the run, in all the panning (of over one hundred) I never missed finding gold before passing through the machine, and after passing the machine, I found only two colors in panning after going through; In other words, only two colors were found in the tailings after panning over 120 pans. Of the many methods that have been tried for saving the gold from the sea-sands on this coast for the last twenty-five years, none have given as satisfactory results as the Victor. I have no hesitation in saying that the machine properly handled, will save a larger per centage of gold contained in sea-sands

than any process in my experience of over thirty years. The machine is equally well adapted to saving the gold from mill tailings when it is too fine to amalgamate on ordinary plates. In milling talcky ores, I know of no process so well adapted to saving gold as the Victor Amalgamator. The above run showed the capacity of the machine (small size) to be about twenty-five tons per day.

Respectfully,  
GEO. O. KILBOURNE.

Send for catalogue and particulars.



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Established in Colorado, 1866. Samples by mail or express will receive prompt and careful attention. Gold and Silver Bullion refined, melted and assayed, or purchased.  
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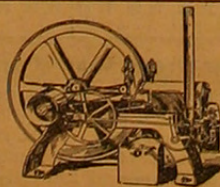
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| FROM                    | TO          | Car Loads, in dollars and cents per ton of 2,000 lbs. |                                        |                                        |                                                                                        |       |
|-------------------------|-------------|-------------------------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------------------------------------------------------|-------|
|                         |             | Ore & Concentrates.                                   |                                        |                                        | Lead Bullion, valuation not to exceed \$100 per ton.                                   |       |
|                         |             | Valuation not to exceed \$50 per ton.                 | Valuation not to exceed \$100 per ton. | Valuation not to exceed \$300 per ton. | Base Metal, Copper Matte, Bar and Black Copper, valuation not to exceed \$300 per ton. |       |
| Guaymas, Mex.           | El Paso     | 10 00                                                 | 11 50                                  | 13 50                                  |                                                                                        |       |
|                         | Pueblo      | 13 50                                                 | 15 00                                  | 17 00                                  |                                                                                        |       |
|                         | Denver      | 15 00                                                 | 16 50                                  | 18 50                                  |                                                                                        |       |
|                         | Kansas City | 15 50                                                 | 17 00                                  | 19 00                                  |                                                                                        |       |
| Ortiz, " "              | El Paso     | 9 50                                                  | 11 00                                  | 13 00                                  |                                                                                        |       |
|                         | Pueblo      | 12 50                                                 | 14 00                                  | 16 00                                  |                                                                                        |       |
|                         | Denver      | 14 00                                                 | 15 50                                  | 17 50                                  |                                                                                        |       |
|                         | Kansas City | 14 50                                                 | 16 00                                  | 18 00                                  |                                                                                        |       |
| Torres, " "             | El Paso     | 9 00                                                  | 10 50                                  | 12 50                                  |                                                                                        |       |
|                         | Pueblo      | 11 50                                                 | 13 00                                  | 15 00                                  |                                                                                        |       |
|                         | Denver      | 13 00                                                 | 14 00                                  | 16 50                                  |                                                                                        |       |
|                         | Kansas City | 13 50                                                 | 15 00                                  | 17 00                                  |                                                                                        |       |
| Hermosillo, " "         | El Paso     | 8 50                                                  | 10 00                                  | 12 00                                  |                                                                                        |       |
|                         | Pueblo      | 10 00                                                 | 11 50                                  | 13 50                                  |                                                                                        |       |
|                         | Denver      | 11 50                                                 | 13 00                                  | 15 00                                  |                                                                                        |       |
|                         | Kansas City | 12 00                                                 | 13 50                                  | 15 50                                  |                                                                                        |       |
| Pesqueira, " "          | El Paso     | 8 00                                                  | 9 50                                   | 11 50                                  |                                                                                        |       |
|                         | Pueblo      | 10 00                                                 | 11 50                                  | 13 50                                  |                                                                                        |       |
|                         | Denver      | 11 50                                                 | 13 00                                  | 15 00                                  |                                                                                        |       |
|                         | Kansas City | 12 00                                                 | 13 50                                  | 15 00                                  |                                                                                        |       |
| Querobabi, " "          | El Paso     | 7 00                                                  | 8 50                                   | 10 50                                  |                                                                                        |       |
|                         | Pueblo      | 10 00                                                 | 11 50                                  | 13 50                                  |                                                                                        |       |
|                         | Denver      | 11 50                                                 | 13 00                                  | 15 00                                  |                                                                                        |       |
|                         | Kansas City | 11 50                                                 | 13 00                                  | 15 00                                  |                                                                                        |       |
| Santa Ana, " "          | El Paso     | 6 50                                                  | 8 00                                   | 10 00                                  |                                                                                        |       |
|                         | Pueblo      | 9 50                                                  | 11 00                                  | 13 00                                  |                                                                                        |       |
|                         | Denver      | 11 00                                                 | 12 50                                  | 14 50                                  |                                                                                        |       |
|                         | Kansas City | 11 50                                                 | 13 00                                  | 15 00                                  |                                                                                        |       |
| Magdalena, " "          | El Paso     | 6 00                                                  | 7 50                                   | 9 50                                   |                                                                                        |       |
|                         | Pueblo      | 9 00                                                  | 11 00                                  | 13 00                                  |                                                                                        |       |
|                         | Denver      | 11 00                                                 | 12 50                                  | 14 50                                  |                                                                                        |       |
|                         | Kansas City | 11 50                                                 | 13 00                                  | 15 00                                  |                                                                                        |       |
| Imuris, " "             | El Paso     | 6 00                                                  | 7 50                                   | 9 50                                   |                                                                                        |       |
|                         | Pueblo      | 9 00                                                  | 11 00                                  | 13 00                                  |                                                                                        |       |
|                         | Denver      | 11 00                                                 | 12 50                                  | 14 50                                  |                                                                                        |       |
|                         | Kansas City | 11 50                                                 | 13 00                                  | 15 00                                  |                                                                                        |       |
| Nogales, A. T.          | El Paso     | 5 50                                                  | 6 50                                   | 8 50                                   |                                                                                        |       |
|                         | Pueblo      | 9 00                                                  | 10 50                                  | 12 50                                  | 15 20                                                                                  | 16 60 |
|                         | Denver      | 10 50                                                 | 12 00                                  | 14 00                                  | 17 20                                                                                  | 18 60 |
|                         | Kansas City | 11 00                                                 | 12 50                                  | 14 50                                  | 18 40                                                                                  | 21 45 |
| Calabasas, " "          | El Paso     | 5 50                                                  | 6 50                                   | 8 50                                   |                                                                                        |       |
|                         | Pueblo      | 8 50                                                  | 10 00                                  | 12 00                                  | 15 20                                                                                  | 16 40 |
|                         | Denver      | 10 00                                                 | 11 50                                  | 13 50                                  | 17 20                                                                                  | 18 40 |
|                         | Kansas City | 10 50                                                 | 12 00                                  | 14 00                                  | 18 25                                                                                  | 21 30 |
| Sanfords, " "           | El Paso     | 5 50                                                  | 6 50                                   | 8 50                                   |                                                                                        |       |
|                         | Pueblo      | 8 00                                                  | 9 50                                   | 11 50                                  | 15 00                                                                                  | 16 20 |
|                         | Denver      | 9 50                                                  | 11 00                                  | 13 00                                  | 17 00                                                                                  | 18 20 |
|                         | Kansas City | 10 00                                                 | 11 50                                  | 13 50                                  | 18 15                                                                                  | 21 20 |
| Crittenden, " "         | El Paso     | 4 75                                                  | 5 75                                   | 7 75                                   |                                                                                        |       |
|                         | Pueblo      | 8 00                                                  | 9 50                                   | 11 50                                  | 14 80                                                                                  | 16 00 |
|                         | Denver      | 9 50                                                  | 11 00                                  | 13 00                                  | 16 80                                                                                  | 18 00 |
|                         | Kansas City | 10 00                                                 | 11 50                                  | 13 50                                  | 18 00                                                                                  | 20 95 |
| Fairbank, " "           | El Paso     | 4 40                                                  | 4 40                                   | 6 50                                   |                                                                                        |       |
|                         | Pueblo      | 8 00                                                  | 9 50                                   | 11 50                                  | 14 00                                                                                  | 15 20 |
|                         | Denver      | 9 50                                                  | 11 00                                  | 13 00                                  | 16 00                                                                                  | 17 20 |
|                         | Kansas City | 10 00                                                 | 11 50                                  | 13 50                                  | 17 50                                                                                  | 20 40 |
| Tucson, " "             | El Paso     | 4 35                                                  | 5 00                                   | 7 00                                   |                                                                                        |       |
|                         | Pueblo      | 8 00                                                  | 10 00                                  | 12 00                                  | 14 60                                                                                  | 15 80 |
|                         | Denver      | 10 50                                                 | 12 00                                  | 14 00                                  | 16 60                                                                                  | 17 80 |
|                         | Kansas City | 11 00                                                 | 12 50                                  | 14 50                                  | 17 80                                                                                  | 20 85 |
| Benson, " "             | El Paso     | 8 00                                                  | 10 00                                  | 12 00                                  | 13 80                                                                                  | 15 00 |
|                         | Pueblo      | 9 50                                                  | 11 50                                  | 13 50                                  | 15 80                                                                                  | 17 00 |
|                         | Denver      | 10 00                                                 | 12 00                                  | 14 00                                  | 17 25                                                                                  | 20 15 |
|                         | Kansas City | 10 50                                                 | 12 50                                  | 14 50                                  | 18 50                                                                                  | 21 50 |
| Steins Pass, N. M.      | El Paso     | 8 00                                                  | 9 50                                   | 11 50                                  | 12 20                                                                                  | 13 20 |
|                         | Pueblo      | 9 50                                                  | 11 00                                  | 13 00                                  | 14 20                                                                                  | 15 20 |
|                         | Denver      | 10 00                                                 | 11 50                                  | 13 50                                  | 16 05                                                                                  | 18 70 |
|                         | Kansas City | 10 50                                                 | 12 00                                  | 14 00                                  | 17 15                                                                                  | 19 80 |
| Lordsburg, " "          | El Paso     | 7 50                                                  | 9 00                                   | 11 00                                  | 11 80                                                                                  | 12 80 |
|                         | Pueblo      | 9 00                                                  | 10 50                                  | 12 50                                  | 13 80                                                                                  | 14 80 |
|                         | Denver      | 9 50                                                  | 11 00                                  | 13 00                                  | 15 75                                                                                  | 18 40 |
|                         | Kansas City | 10 00                                                 | 11 50                                  | 13 50                                  | 16 80                                                                                  | 19 40 |
| Silver City, " "        | El Paso     | 2 50                                                  | 3 20                                   | 4 70                                   | 6 00                                                                                   |       |
|                         | Pueblo      | 6 50                                                  | 8 00                                   | 10 00                                  | 11 20                                                                                  | 12 20 |
|                         | Denver      | 8 00                                                  | 9 50                                   | 11 50                                  | 12 20                                                                                  | 13 20 |
|                         | Kansas City | 8 50                                                  | 10 00                                  | 12 00                                  | 13 40                                                                                  | 15 80 |
| Hudson, " "             | El Paso     | 2 40                                                  | 3 00                                   | 4 50                                   | 5 60                                                                                   |       |
|                         | Pueblo      | 6 50                                                  | 8 00                                   | 10 00                                  | 11 20                                                                                  | 12 20 |
|                         | Denver      | 8 00                                                  | 9 50                                   | 11 50                                  | 12 20                                                                                  | 13 20 |
|                         | Kansas City | 8 50                                                  | 10 00                                  | 12 00                                  | 13 40                                                                                  | 15 80 |
| Deming, " "             | El Paso     | 2 20                                                  | 2 80                                   | 3 80                                   | 5 20                                                                                   |       |
|                         | Pueblo      | 6 00                                                  | 7 50                                   | 9 50                                   | 10 80                                                                                  | 11 80 |
|                         | Denver      | 7 50                                                  | 9 00                                   | 11 00                                  | 12 00                                                                                  | 13 20 |
|                         | Kansas City | 8 00                                                  | 9 50                                   | 11 50                                  | 13 00                                                                                  | 15 40 |
| Florida and Lake Valley | El Paso     | 2 20                                                  | 2 80                                   | 3 80                                   | 5 00                                                                                   |       |
|                         | Pueblo      | 6 00                                                  | 7 50                                   | 9 50                                   | 10 80                                                                                  | 11 80 |
|                         | Denver      | 7 50                                                  | 9 00                                   | 11 00                                  | 12 00                                                                                  | 13 20 |
|                         | Kansas City | 8 00                                                  | 9 50                                   | 11 50                                  | 13 00                                                                                  | 15 40 |
| Nutt, " "               | El Paso     | 2 20                                                  | 2 80                                   | 3 80                                   | 5 00                                                                                   |       |
|                         | Pueblo      | 6 00                                                  | 7 50                                   | 9 50                                   | 10 80                                                                                  | 11 80 |
|                         | Denver      | 7 50                                                  | 9 00                                   | 11 00                                  | 12 00                                                                                  | 13 20 |
|                         | Kansas City | 8 00                                                  | 9 50                                   | 11 50                                  | 13 00                                                                                  | 15 40 |
| El Paso, " "            | El Paso     | 1 50                                                  | 2 00                                   | 3 00                                   | 4 00                                                                                   |       |
|                         | Pueblo      | 6 00                                                  | 7 50                                   | 9 50                                   | 10 80                                                                                  | 11 80 |
|                         | Denver      | 7 50                                                  | 9 00                                   | 11 00                                  | 12 00                                                                                  | 13 20 |
|                         | Kansas City | 8 00                                                  | 9 50                                   | 11 50                                  | 13 00                                                                                  | 15 40 |
| Las Cruces, " "         | El Paso     | 2 00                                                  | 2 00                                   | 3 00                                   | 4 00                                                                                   |       |
|                         | Pueblo      | 6 00                                                  | 7 50                                   | 9 50                                   | 10 80                                                                                  | 11 80 |
|                         | Denver      | 7 50                                                  | 9 00                                   | 11 00                                  | 12 00                                                                                  | 13 20 |
|                         | Kansas City | 8 00                                                  | 9 50                                   | 11 50                                  | 13 00                                                                                  | 15 40 |
| Rincon, " "             | El Paso     | 2 00                                                  | 2 00                                   | 3 00                                   | 4 00                                                                                   |       |
|                         | Pueblo      | 6 00                                                  | 7 50                                   | 9 50                                   | 10 80                                                                                  | 11 80 |
|                         | Denver      | 7 50                                                  | 9 00                                   | 11 00                                  | 12 00                                                                                  | 13 20 |
|                         | Kansas City | 8 00                                                  | 9 50                                   | 11 50                                  | 13 00                                                                                  | 15 40 |

FROM

TO

Car Loads, in dollars and cents per ton of 2,000 lbs.

Ore Concentrates.

Valuation not to exceed \$50 per ton.

Valuation not to exceed \$100 per ton.

Valuation not to exceed \$300 per ton.

Lead Bullion, valuation not to exceed \$100 per ton.

Base Metal, Copper Matte, Bar and Black Copper, valuation not to exceed \$300 per ton.

A. T. &amp; S. F. R. R.

ATLANTIC &amp; PACIFIC RAILROAD

## Rates on Copper or Zinc Ore to Canon City.

Taking Effect July 1st, 1891.—So far as rates on Copper or Zinc Ores are concerned, Canon City, Col., will be considered as common with Pueblo; in other words the rates shown in Tariff as applying on shipments of Ore to Pueblo, will also apply on shipments of Copper or Zinc Ore to Canon City.

In the absence of positive information as to the value of Ore, Ore Concentrations, or Base Metal, Agents will bill at rates sufficiently high to protect the Company. These rates can be corrected when evidence of actual value is produced.

The market price at destination, to be verified by assays made

by the Railroad Company, at owner's expense, will govern the value and determine the rate.

Agents must cause shippers to understand the condition upon which these rates are based, and should make their receipts read: "Rates subject to correction according to value at destination."

These rates only apply on lots of ten tons or over. On lots of four tons and under ten, 20 per cent, and on lots of one ton and less than four, 40 per cent will be added to above rates. Base Metal, Copper Matte and Ore Concentrations, in lots of less than one ton, will take first-class rates from all the above points, except when the rate based on valuation makes it higher, that rates on small lots of high value may not be less than the rates when in lots of one ton or over as above.

Charges on Ore in car-loads must be guaranteed, and on lots less than a car-load must in all cases be prepaid.

Omaha Rates.—The Rates to Omaha, Neb., all grades, will be \$1 per ton higher than the rates to Kansas City.

Note.—All shipments of Ore and Concentrations valued not to exceed \$50 per ton must be billed at the rate for Ore and Concentrations, "Valuation over \$50 not to exceed \$100 per ton," and shipping receipt must be issued by agent at said rate. Agent at destination is authorized to correct to rate for Ore and Concentrations, "Valuation not to exceed \$50 per ton," upon presentation of properly certified smelter returns, showing that the value does not exceed \$50 per ton.

Intermediate points not named will take rates provided for next station beyond.

## SOUTHERN CALIFORNIA RAILWAY.

Rate on Ore in car loads, valuation not to exceed \$50 per ton, minimum weight 24,000 lbs. Oro Grande, Cal., to Pueblo, Col., \$10.30 per ton.

Same, Victor, Cal., to Pueblo, \$10.35 per ton.

Ore, car loads, when coming from the Republic of Mexico valuation not to exceed \$50 per ton; San Diego or National City to Denver, Col., and Pueblo, Col., \$12 per ton of 2,000 lbs.

Ore, valuation not to exceed \$100 per net ton and so receipted for, minimum weight 30,000 lbs. 75c per 100 lbs, to Denver and Pueblo, Col., from all points on the Southern California Railway.

## ORE TARIFF.

From Points in New Mexico, Arizona and California, to  
El Paso, San Francisco and Vallejo Junction.

## SOUTHERN PACIFIC R. R. COMPANY.

| FROM                | TO            | Valuation not to exceed \$50 per ton. |                                        |                                        |                                                                                      |       |
|---------------------|---------------|---------------------------------------|----------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------|-------|
|                     |               | Valuation not to exceed \$50 per ton. | Valuation not to exceed \$100 per ton. | Valuation not to exceed \$300 per ton. | Lead Bullion, Copper Matte, Bar and Black Copper, value not to exceed \$300 per ton. |       |
| El Paso, Tex.       | San Francisco | 7.00                                  | 9.10                                   | 9.10                                   | 11.20                                                                                |       |
| Deming, N.M.        | El Paso       | 2.00                                  |                                        | 2.00                                   | 2.20                                                                                 | 2.20  |
|                     | San Francisco | 7.00                                  |                                        | 10.40                                  | 13.00                                                                                | 18.20 |
| Gage, " "           | El Paso       | 2.00                                  |                                        | 2.00                                   | 2.20                                                                                 | 2.80  |
|                     | San Francisco | 7.00                                  |                                        | 10.20                                  | 12.80                                                                                | 18.00 |
| Separ, " "          | El Paso       | 2.50                                  |                                        | 2.50                                   | 3.00                                                                                 | 3.80  |
|                     | San Francisco | 7.00                                  |                                        | 10.20                                  | 12.80                                                                                | 17.60 |
| Lordsburg, " "      | El Paso       | 2.50                                  | 3.00                                   | 3.00                                   | 3.60                                                                                 | 4.40  |
|                     | San Francisco | 7.00                                  |                                        | 10.00                                  | 12.40                                                                                | 17.40 |
| Steins Pass, " "    | El Paso       | 2.50                                  | 3.20                                   | 3.20                                   | 4.00                                                                                 | 5.00  |
|                     | San Francisco | 7.00                                  |                                        | 9.80                                   | 12.20                                                                                | 17.00 |
| Bowie, A. T.        | El Paso       | 3.00                                  | 3.60                                   | 3.60                                   | 4.40                                                                                 | 5.80  |
|                     | San Francisco | 7.00                                  |                                        | 9.40                                   | 11.80                                                                                | 16.60 |
| Willcox, " "        | El Paso       | 3.00                                  | 4.00                                   | 4.00                                   | 5.00                                                                                 | 6.40  |
|                     | San Francisco | 7.00                                  |                                        | 9.20                                   | 11.60                                                                                | 16.20 |
| Dragoon Summit, " " | El Paso       | 3.00                                  | 4.20                                   | 4.20                                   | 5.20                                                                                 | 6.80  |
|                     | San Francisco | 7.00                                  |                                        | 9.20                                   | 11.40                                                                                | 16.00 |
| Benson, " "         | El Paso       | 3.50                                  | 4.35                                   | 4.35                                   | 5.60                                                                                 | 7.40  |
|                     | San Francisco | 7.00                                  |                                        | 9.00                                   | 11.20                                                                                | 15.80 |
| Tucson, " "         | El Paso       | 3.50                                  | 4.35                                   | 5.20                                   | 6.40                                                                                 | 8.60  |
|                     | San Francisco | 7.00                                  |                                        | 8.80                                   | 10.60                                                                                | 15.00 |
| Casa Grande, " "    | El Paso       | 4.00                                  | 5.00                                   | 6.00                                   | 7.60                                                                                 | 10.40 |
|                     | San Francisco | 7.00                                  |                                        | 8.00                                   | 10.00                                                                                | 14.00 |
| Maricopa, " "       | El Paso       | 6.40                                  | 6.40                                   | 6.40                                   | 8.00                                                                                 | 10.80 |
|                     | San Francisco | 7.00                                  |                                        | 7.80                                   | 9.80                                                                                 | 13.80 |
| Gila Bend, " "      | El Paso       | 6.70                                  | 6.70                                   | 6.70                                   | 8.40                                                                                 | 11.35 |
|                     | San Francisco | 7.00                                  |                                        | 7.40                                   | 9.20                                                                                 | 13.00 |
| Aztec, " "          | El Paso       | 7.05                                  | 7.05                                   | 7.05                                   | 8.85                                                                                 | 12.00 |
|                     | San Francisco | 7.00                                  |                                        | 7.00                                   | 8.80                                                                                 | 12.40 |
| Gila City, " "      | El Paso       | 7.55                                  | 7.55                                   | 7.55                                   | 9.45                                                                                 | 12.85 |
|                     | San Francisco | 6.60                                  |                                        | 6.60                                   | 8.20                                                                                 | 11.40 |
| Yuma, " "           | El Paso       |                                       |                                        | 7.70                                   | 9.60                                                                                 | 13.05 |
|                     | San Francisco |                                       |                                        | 6.40                                   | 8.00                                                                                 | 11.20 |
| Newhall, Cal.       | San Francisco | 6.00                                  | 6.00                                   | 6.00                                   |                                                                                      |       |
| Mojave, " "         | San Francisco | 3.85                                  | 3.85                                   | 4.80                                   | 5.00                                                                                 |       |
| Caliente, " "       | San Francisco | 3.80                                  |                                        | 3.80                                   | 4.95                                                                                 |       |
| Milton, " "         | San Francisco | 2.10                                  |                                        | 2.05                                   |                                                                                      |       |
| Hollister, " "      | San Francisco |                                       |                                        | 2.50                                   |                                                                                      |       |

These rates apply only on lots of twelve tons or over. On lots of four tons and under twelve, 20 per cent; and on lots of one ton and less than four 40 per cent will be added to the above rates.

Vallejo Junction takes same rate as San Francisco.



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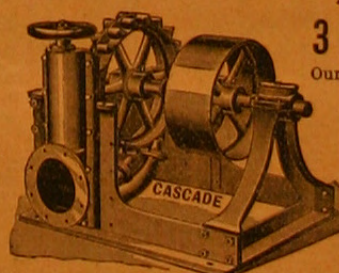
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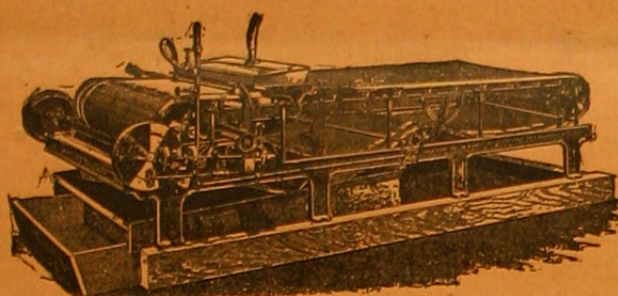
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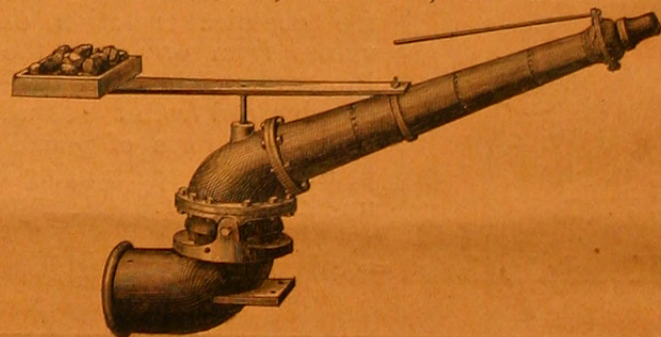
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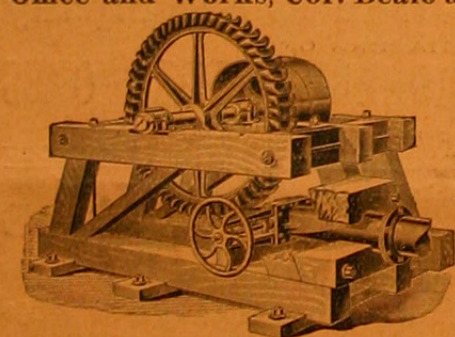
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IMPROVED HYDRAULIC GIANT

The above cut illustrates the improved form of Hydraulic Giants, in which the Center Bolt is dispensed with, which was so liable to catch trash. Prices and catalogues of our specialties sent free on application.



The above cut shows the general arrangement of Knight's Standard Water Wheels, of which there are more than 450 in use in California alone. These wheels are made from 2 feet to 6 feet in diameter, from 10 to 1000 horse power, and adapted to all heads and purposes. Descriptive circulars mailed free on application.

## PARKE & LACY COMPANY

21 and 23 Fremont Street, San Francisco, Cal.

MINING MACHINERY AND SUPPLIES, ENGINES AND BOILERS

ROPP STRAIGHT LINE FURNACE

FOR ROASTING, CHLORINATING, AND DESULPHURIZING ORES.

Knowles Steam Pumps      Lidgerwood Hoisting Engines  
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